

## SERVICE MANUAL

### 3LCD DATA PROJECTOR

***TLP470EF, TLP470UF***  
***TLP471EF, TLP471UF***  
***TLP670EF, TLP670UF***  
***TLP671EF, TLP671UF***

#### — SUMMARY —

This service manual covers only different portions from service manual (File No. 330-9904) for TLP450E, TLP450U, TLP451E, TLP451U, TLP650E, TLP650U, TLP651E and TLP651U.

The following parts list covers only the different parts from the base models,

For the other parts, please refer to the service manual(File No, 330-9904) of the base models,

The base models of each model are shown below,

	Base Model
TLP470EF	TLP450E
TLP471EF	TLP451E (with document imaging camera)
TLP470UF	TLP450U
TLP471UF	TLP451U (with document imaging camera)
TLP670EF	TLP650E
TLP671EF	TLP651E (with document imaging camera)
TLP670UF	TLP650U
TLP671UF	TLP651U (with document imaging camera)

#### Difference parts list(TLP47 series)

Location No.	Part No. (TLP470UF)	Part No. (TLP471UF)	Part No. (TLP470EF)	Part No. (TLP471EF)	Description
E202G	23301364	23301364	23301364	23301364	LCD Panel P09SG210(G)
E201G	23301367	23301367	23301367	23301367	LCD Panel P09SG220(G)
E200	23430908	23430908	23430908	23430908	Optical Engine
E200M	23430915	23430915	23430915	23430915	Optical Main Frame
E200F	23430911	23430911	23430911	23430911	Optical Sub Frame
E200C	23588618	23588618	23588618	23588618	Cooling FAN
E201B	23430919	23430919	23430919	23430919	Polarizer(B)
E201G	23430918	23430918	23430918	23430918	Polarizer(G)
E201R	23430917	23430917	23430917	23430917	Polarizer(R)
E001	23007396	23007396	23007396	23007396	PC Board MAIN
U0021	23785554	23785554	23785554	23785554	PC Board RGB
U0022	23785555	23785555	23785555	23785555	PC Board INPUT
Q403	23314993	23314993	23314993	23314993	Transistor
P800	23122401	23122401	23122401	23122401	Power Unit
P850	23122400	23122400	23122400	23122400	Lamp Power Unit
Y201	23565206	23565206	23565207	23565207	Owner's Manual E
Y202			23565208	23565208	Owner's Manual F
Y200	23565205	23565205	23565205	23565205	Owner's Manual CD-ROM
Y210	23306332	23306332	23306332	23306332	Remote Control Unit
A302	23564984	23564983	23564992	23564991	Label Rating
E205S	23430793	23430793	23430793	23430793	Panel Holder S-kit

## Difference parts list(TLP67 series)

Location No.	Part No. (TLP670UF)	Part No. (TLP671UF)	Part No. (TLP670EF)	Part No. (TLP671EF)	Description
E202G	23301357	23301357	23301357	23301357	LCD Panel P09XG250(G)
E201G	23301360	23301360	23301360	23301360	LCD Panel P09XG260(G)
E200	23430907	23430907	23430907	23430907	Optical Engine
E200M	23430914	23430914	23430914	23430914	Optical Main Frame
E200F	23430911	23430911	23430911	23430911	Optical Sub Frame
E200C	23588618	23588618	23588618	23588618	Cooling FAN
E201B	23430919	23430919	23430919	23430919	Polarizer(B)
E201G	23430918	23430918	23430918	23430918	Polarizer(G)
E201R	23430917	23430917	23430917	23430917	Polarizer(R)
E001	23007396	23007396	23007396	23007396	PC Board MAIN
U0021	23785554	23785554	23785554	23785554	PC Board RGB
U0022	23785555	23785555	23785555	23785555	PC Board INPUT
Q403	23314993	23314993	23314993	23314993	Transistor
P800	23122401	23122401	23122401	23122401	Power Unit
P850	23122400	23122400	23122400	23122400	Lamp Power Unit
Y201	23565206	23565206	23565207	23565207	Owner's Manual E
Y202			23565208	23565208	Owner's Manual F
Y200	23565205	23565205	23565205	23565205	Owner's Manual CD-ROM
Y210	23306332	23306332	23306332	23306332	Remote Control Unit
A302	23564986	23564985	23564994	23564993	Label Rating
E205S	23430793	23430793	23430793	23430793	Panel Holder S-kit

# TOSHIBA CORPORATION

1-1, SIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001,JAPAN

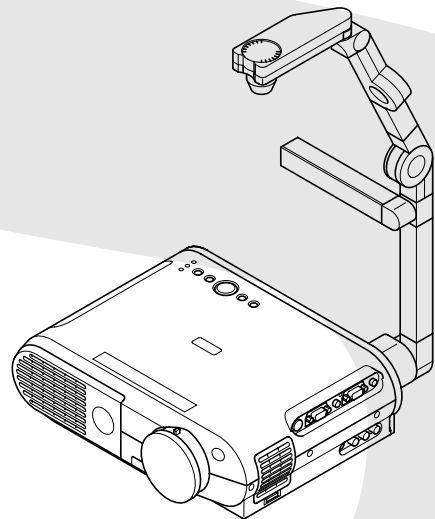
# TOSHIBA

FILE NO. 330-9904

## SERVICE MANUAL

### 3LCD DATA PROJECTOR

***TLP450E, TLP451E***  
***TLP650E, TLP651E***  
***TLP450U, TLP451U***  
***TLP650U, TLP651U***



**TLP451, TLP651**



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# SECTION 1 PART REPLACEMENT AND ADJUSTMENT PROCEDURES

## 1. LOCATION OF MAIN PARTS

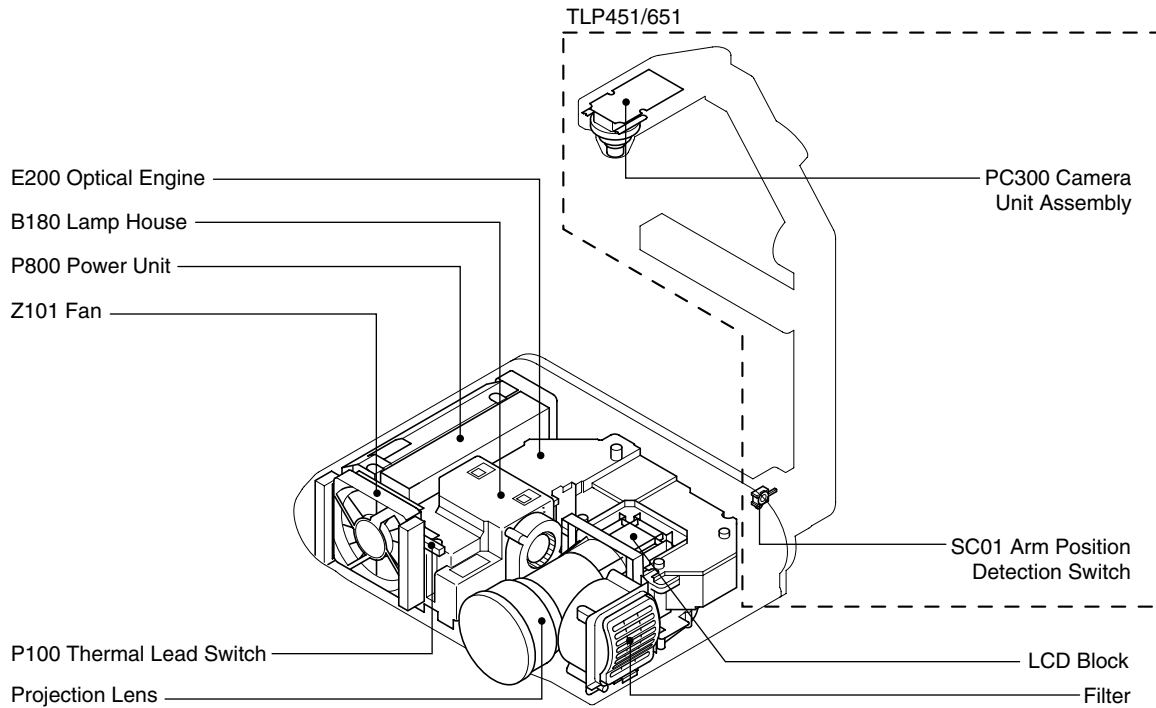


Fig. 1-1-1

## 2. LOCATION OF PC BOARDS

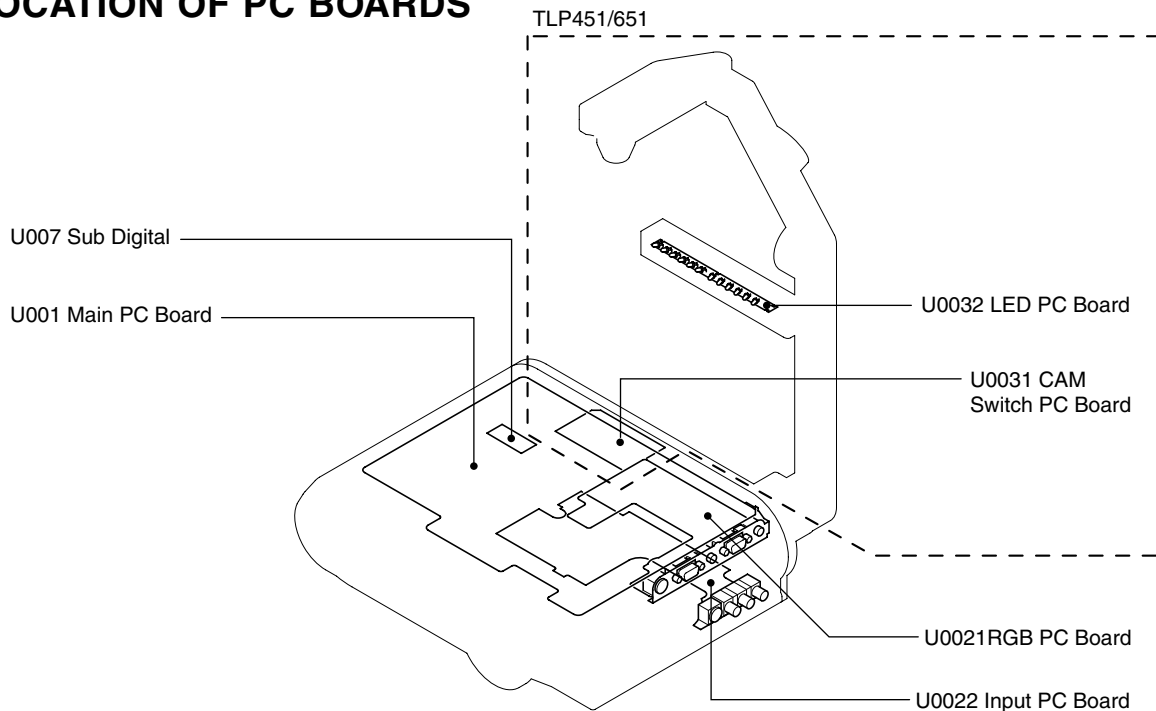


Fig. 1-2-1

## CAUTIONS BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily be damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screwdriver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

### 3. REPLACEMENT OF MECHANICAL PARTS

#### 3-1. Camera Arm Assembly (Only for TLP451/651)

1. Remove six screws (1) and remove the camera arm assembly (2).
2. Remove the connector (3) connecting to the main unit.

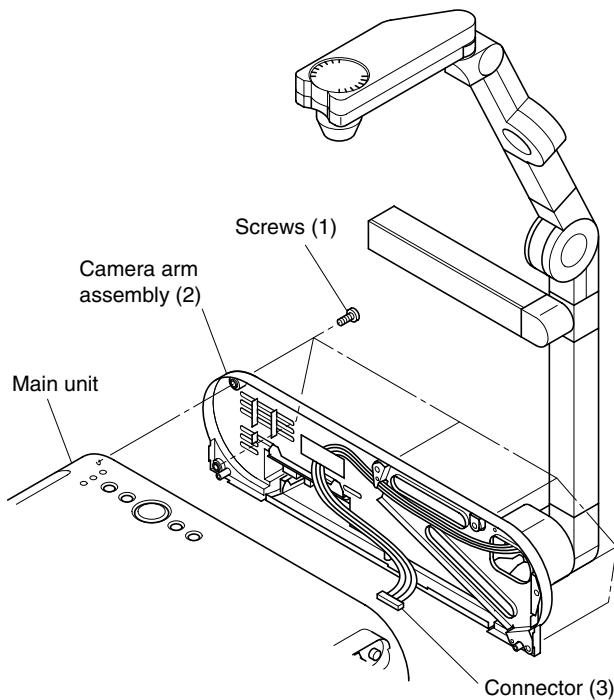


Fig. 1-3-1

#### 3-2. Lamp Assembly

1. Loosen two screws (1) and remove the cover (2).
2. Pull down the handle to remove the lamp assembly (3).

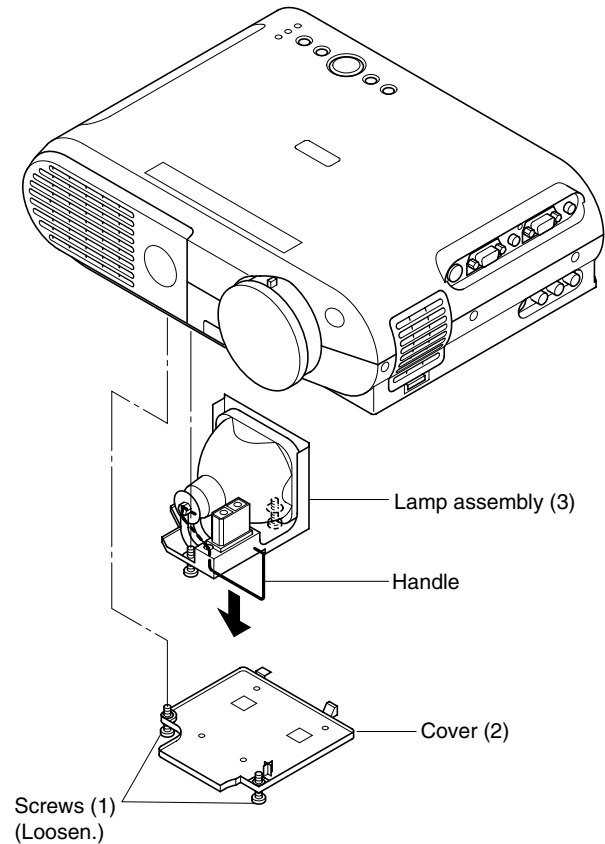


Fig. 1-3-2

### 3-3. Front Cover and Top Cover

1. Remove two screws (1) and remove the front cover (2) by sliding the portion A pushed with a thin bar in the arrow B direction.
2. Remove nine screws (3).
3. Push the handle (4) to one side and remove the top cover (5) by rotating in the arrow C direction.

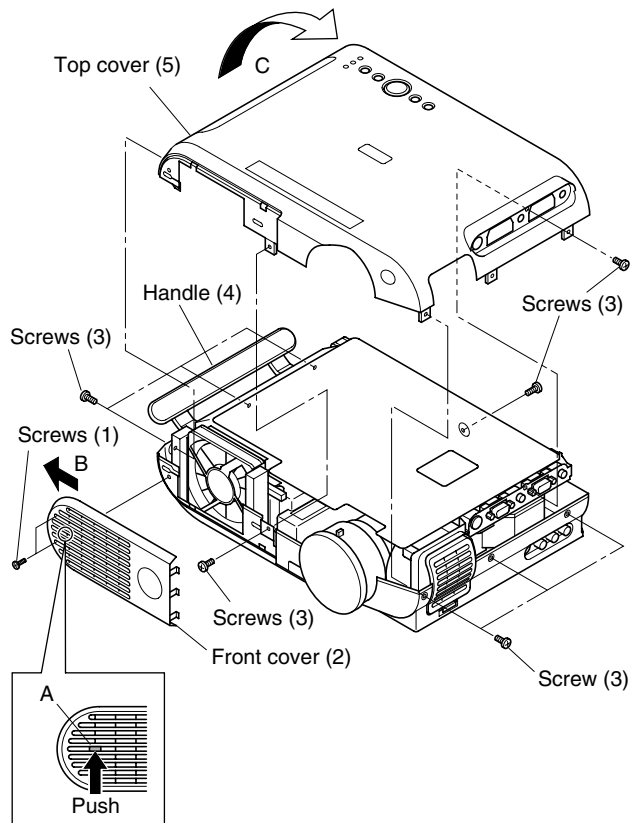


Fig. 1-3-3

### 3-4. Main PC Board

1. Remove four connectors (2) and five FFCs (3) connected to the main PC board (1).
2. Remove seven screws (4).
3. Lift the main PC board (1) upward and remove the main PC board (1) from the RGB PC board (5).

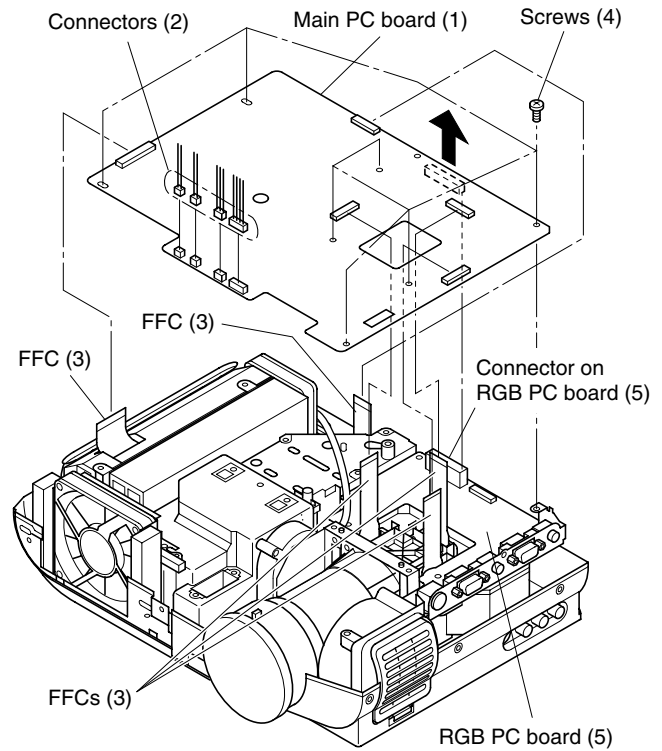


Fig. 1-3-4

### 3-5. RGB PC Board

1. Remove the FFC (1).
2. Remove four screws (2) and RGB PC board (3).
3. Remove four screws (4) and remove the cover (5) from the RGB PC board (3).

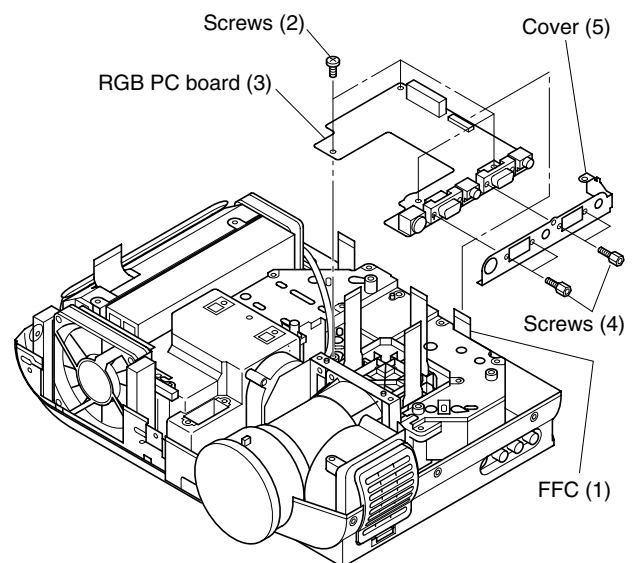


Fig. 1-3-5

### 3-6. Handle and Fan Assembly

1. Pull out the handle (1) upward.
2. Remove two screws (2) and fan assembly (3).
3. Remove two screws (4) and then remove the fan (5) from the fan bracket (6).

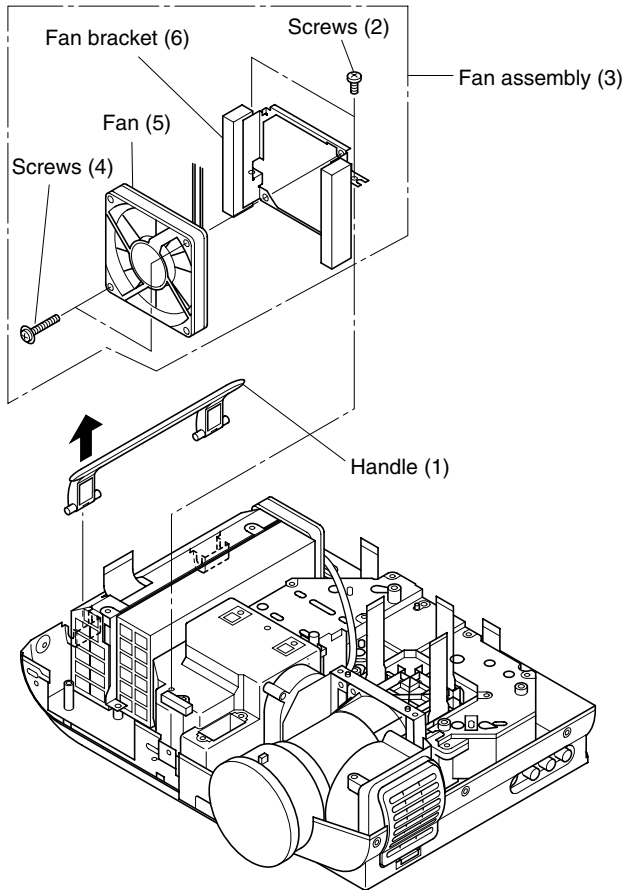


Fig. 1-3-6

### 3-7. Power Supply Unit

1. Remove two screws (1) and then remove the shield plate (2) and the socket (3). (Do not lose the shield plate (2).)
2. Remove two screws (4) and remove the power supply unit (5).
3. Remove two screws (6) and one screw (7) and remove the interlocking switch and plate (8).

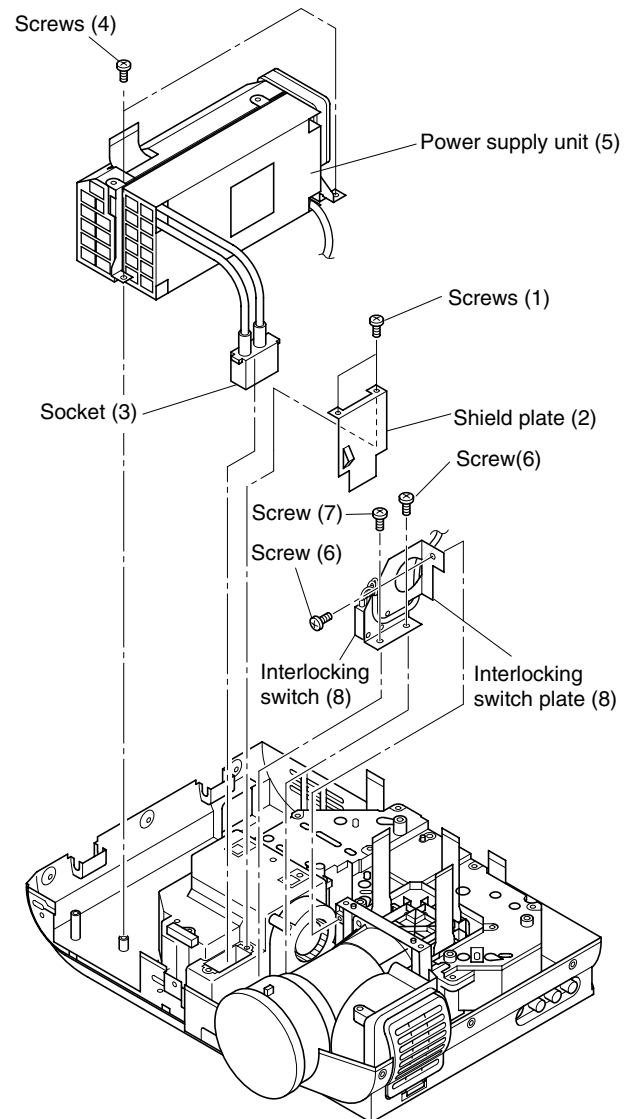


Fig. 1-3-7

### 3-8. Filter Assembly

1. Remove the filter cover (1) from the suction fan holder (2).
2. Remove the filters (3) and (4) from the filter cover (1). (When replacing and/or cleaning the filter, note the arrangement of the filters. Refer to Fig. A)
3. Remove two screws (5) and pull out the filter assembly (6) upward.
4. Remove two screws (7) and remove the fan (8).
5. Remove the suction fan mouse piece (9) from the suction fan holder (2).

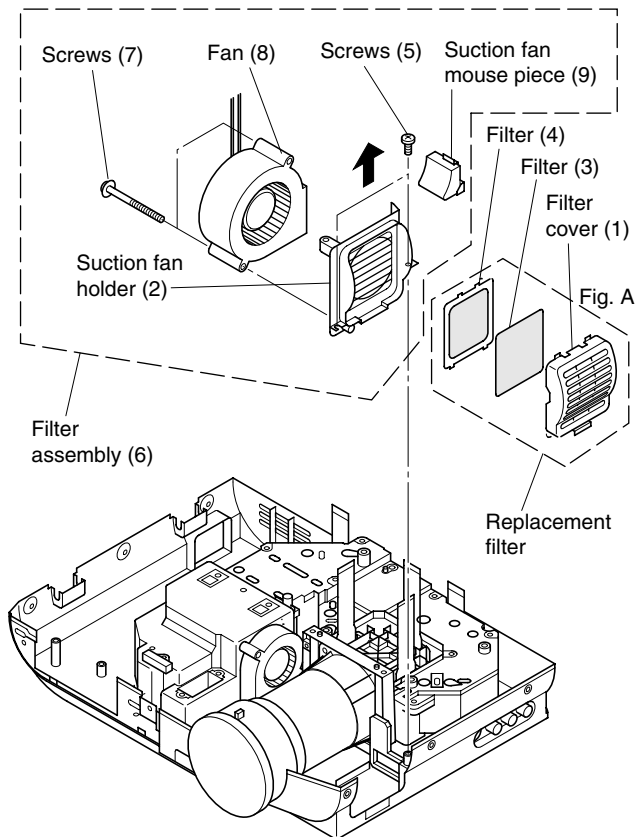


Fig. 1-3-8

### 3-9. Lamp House

1. Remove one screw (1) and (2) and then remove the lamp house (3).
2. Remove one screw (4) and then remove the temperature sensor switch (5).
3. Remove one screw (6) and then remove the fan (7).

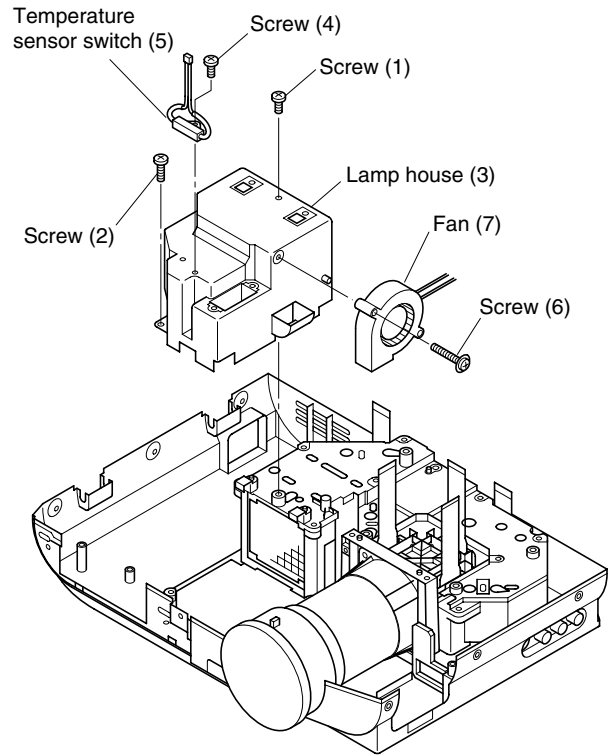


Fig. 1-3-9

### 3-10. Optical Engine

1. Remove four screws (1).
2. Remove the optical engine (2) by lifting upward.

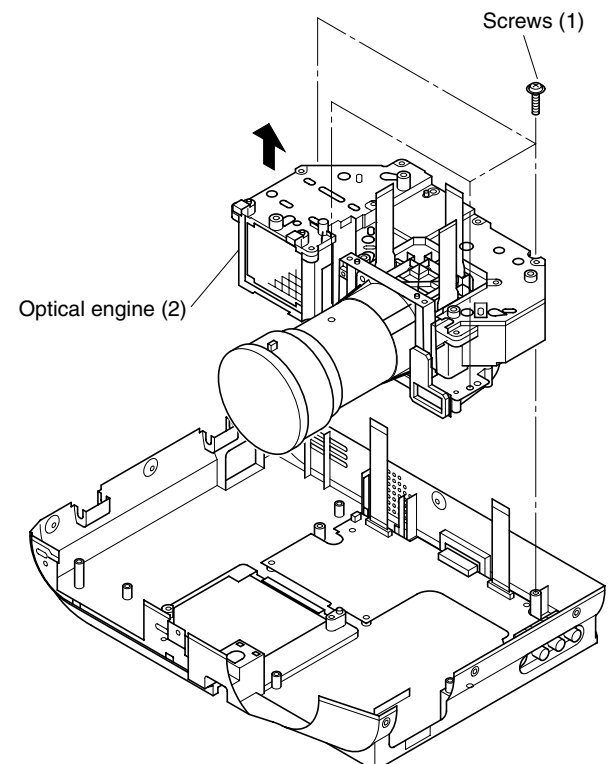


Fig. 1-3-10

### 3-11. Input PC Board

1. Remove five screws (1).
2. Remove the input PC board (2) by turning the arrow direction.

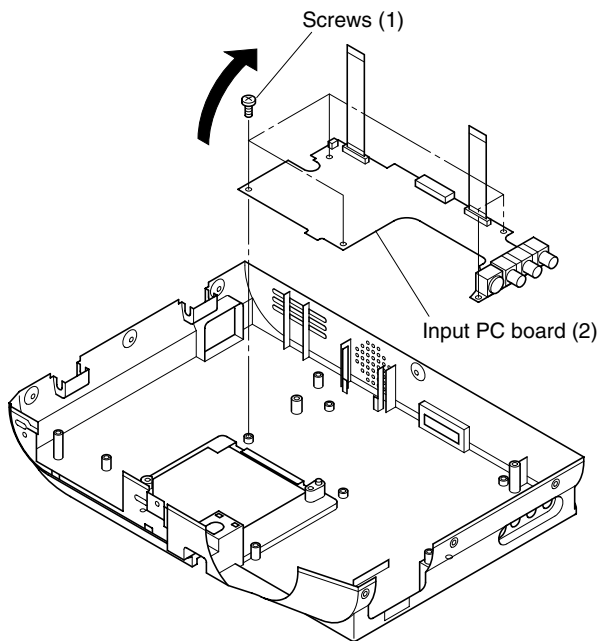


Fig. 1-3-11

### 3-12. Lens

1. Remove four screws (1) and then remove the lens (2).

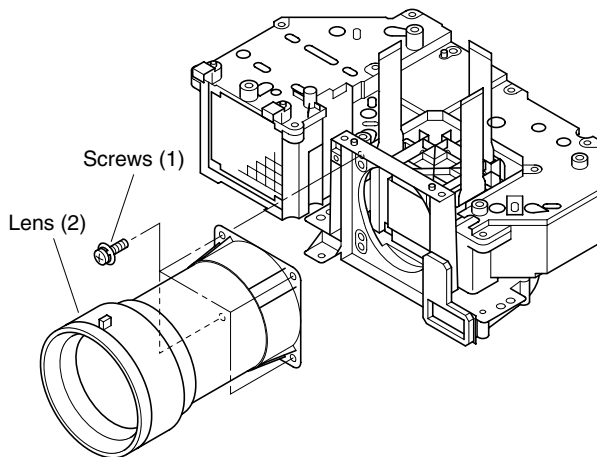


Fig. 1-3-12

### 3-13. Mirror Box

1. Remove three screws (1) and then remove the mirror box (2).

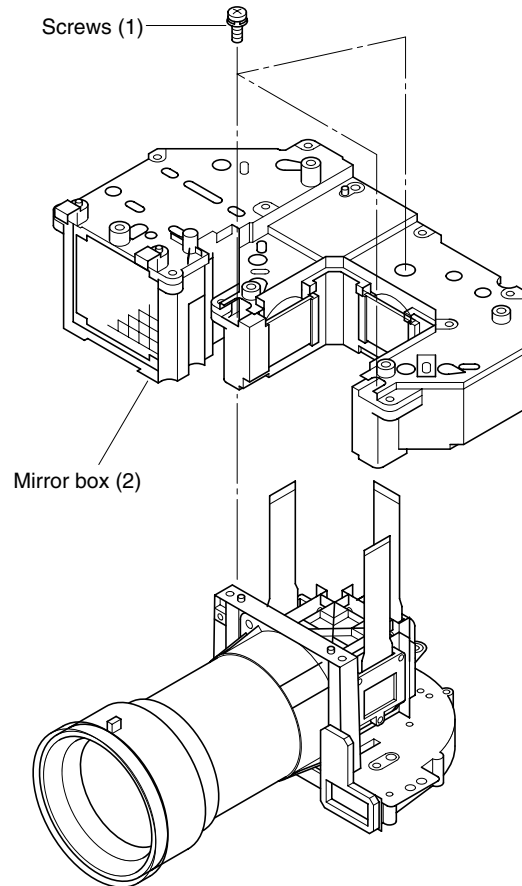


Fig. 1-3-13

### 3-14. LCD Block and LCD Panel

1. Remove three screws (1) and remove the LCD block (2).
2. Remove three screws (3) and remove the LCD panel (4).

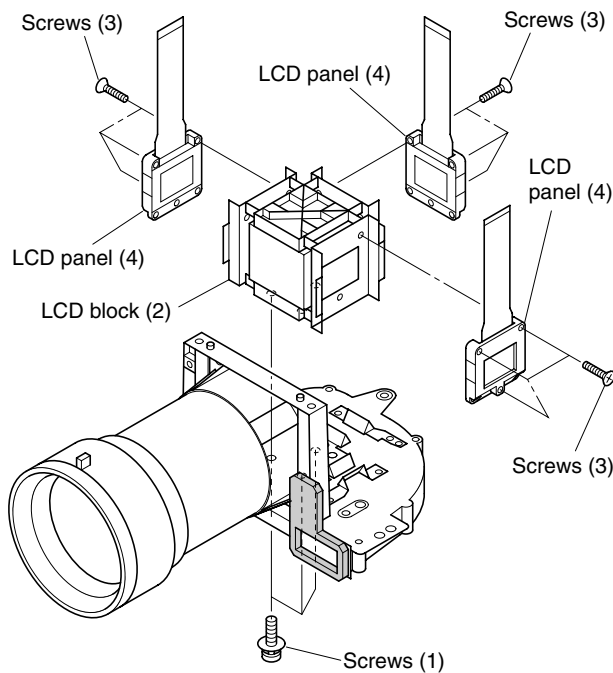


Fig. 1-3-14

#### 3-14-1. Panel Replacement and Adjustment Procedures

##### < Replacement procedures >

1. Remove the prism block from the optical engine.
2. Remove the panel and the panel holder from the prism block. (Refer to Fig. 1-3-15.)

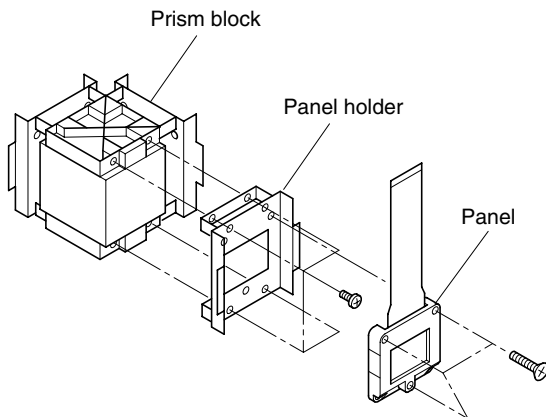


Fig. 1-3-15 Prism block exploded views

3. Mount a holder support for the service holder at the location of the panel holder removed. (Use screws removed in step 2.) (Refer to Fig. 1-3-16 for the following steps.)
4. Mount a new panel on the XY shifting plate with the Z rotation plate placed between them. (Use L upper and lower adjustment screws.) At this time, fix them so that two holes on the panel lower side are matched with the holes on the Z rotation plate.
5. Mount the Z rotation plate on the holder support. (Use S adjustment screws.) Tighten the S adjustment screws lightly.

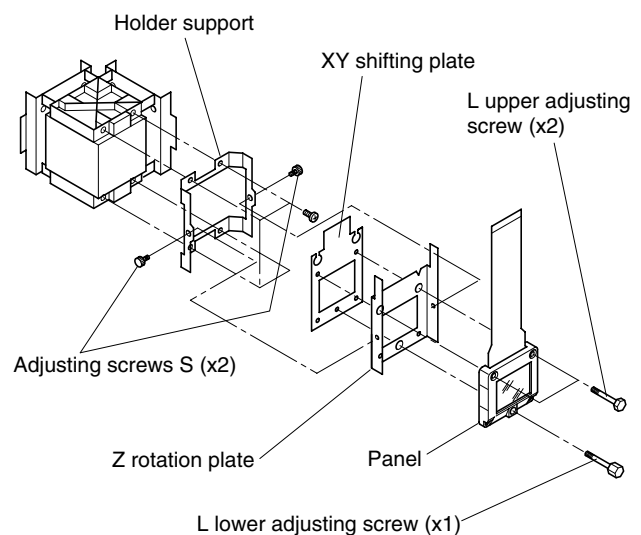


Fig. 1-3-16 Mounting view of a holder for service

##### < Panel adjustment procedures >

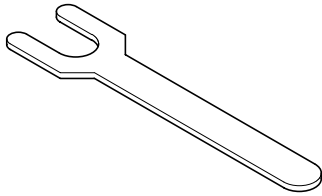
- carried out with a cross hatch signal (RGB input) received.

##### (1) Panel focus adjustment

- carried out with a single color (panel color replaced) status.
1. Shift the Z rotation plate by holding its handles located on the upper sides with fingers or a long-nose pliers, etc. and adjust to obtain the best focus at the whole screen. At this time, adjust the screen center focus by shifting the Z rotation plate entirely back and forth, the left/right screen focus balance by shifting the rotation plate to left/right rotation directions and the upper/lower screen focus balance by shifting it to upper/lower rotation directions.



2. Tighten the S adjusting screws with a wrench for servicing and fix the Z rotation plate. (Refer to Fig. 1-3-17.) If the focus adjusted is upset when fixing, loosen the S adjusting screws and perform the adjustment in step 1 again.



**Fig. 1-3-17 Service wrench**

3. Repeat the steps 1 and 2 until the Z rotation plate is fixed in the best focus condition. Finally, fix the Z rotation plate perfectly by tightening the S adjusting screws further with a long-nose plier, etc.

## (2) Picture element adjustment (Convergence adjustment)

- Superimposing pictures on R and B panels with a picture on G panel.

1. Loosen the upper and lower L adjusting screws fixing the panel.
2. Shift the XY shifting plate by holding its upper portion with fingers or a long-nose plier, etc. and adjust to superimpose the picture on the panel replaced on that of the G panel.

For the relation between the picture and the XY shifting plate shifting directions, the picture shifts to the left when the XY shifting plate shifts to the left seeing from the incident side of the panel (the picture shifts to the right when the XY shifting plate shifts to the right direction.), and the picture shifts to the lower direction when the XY shifting plate shifts to the upper direction (the picture shifts to the upper direction, when the XY shifting plate shifts to the lower direction.).

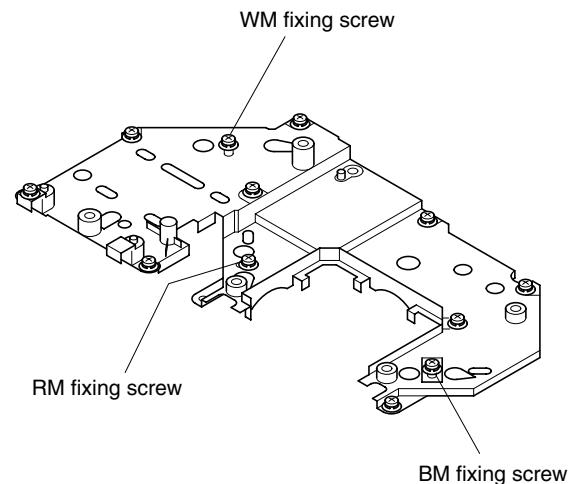
3. Fix the panel by tightening the upper/lower L adjusting screws with a wrench for servicing. If a focus is upset when fixing the panel, loosen the upper/lower L adjusting screws and perform the step 2 again.
4. Repeat the steps 2 and 3 until the panel is fixed with the picture superimposed in the best condition.

## < Holder fixing >

1. Apply screw lock to the S adjusting screws.
2. Fix the Z rotation plate and the holder support, and the Z rotation plate to the XY shifting plate by using a silicone bond at the appropriate locations.

## 3-14-2. Mirror Adjustment Procedures (After polarizing plate replacement)

1. Loosen screws fixing three mirror holder (WM, RM, BM).



**Fig. 1-3-18**

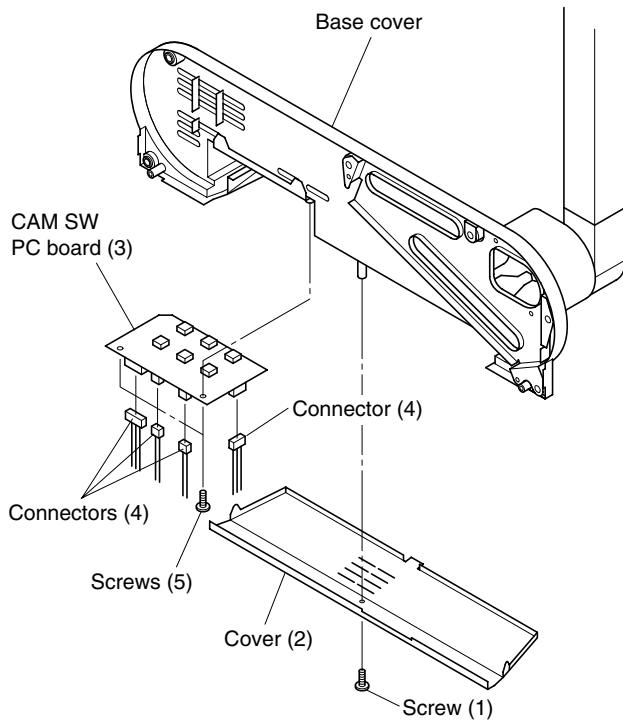
2. Set G single color screen. Move the WM fixing screw along the long hole and fix it where the upper and lower edges of the screen does not show the dark band.
3. Set R single color screen. Fix the RM fixing screw in the same way as shown in step 2.
4. Set B single color screen. Fix BM fixing screw in the same way as shown in step 2.
5. Apply screw lock to each fixing screw. (For the screw lock position, refer to the figure shown below.)



**Fig. 1-3-19**

### 3-15. CAM SW PC Board (Only for TLP451/651)

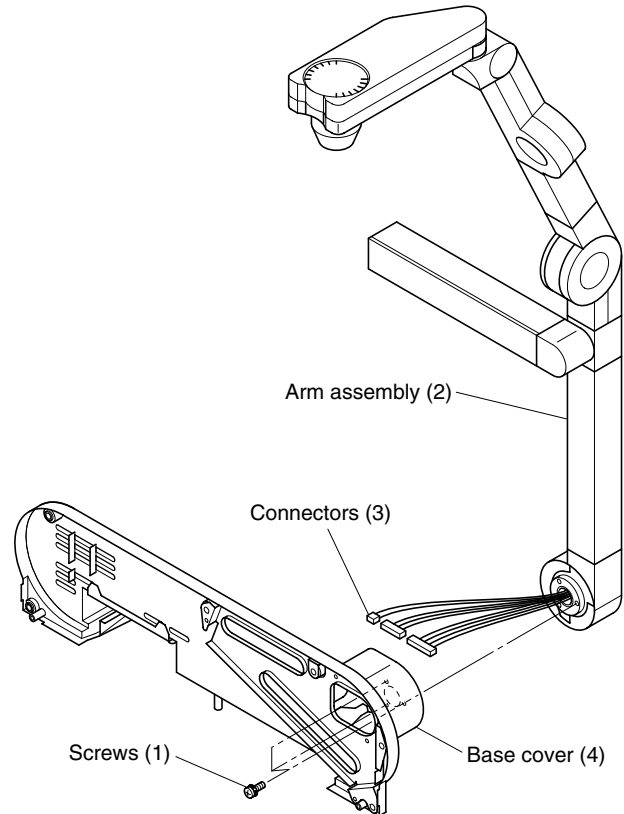
1. Remove one screw (1) and remove the cover (2).
2. Remove four connectors (4) connected to the CAM SW PC board (3).
3. Remove two screws (5) and remove the CAM SW PC board (3).



**Fig. 1-3-20**

### 3-16. Arm Assembly (Only for TLP451/651)

1. Remove three screws (1) and remove the arm assembly (2).
2. Pull out three connectors (3) connected from the arm assembly (2) from the base cover (4).



**Fig. 1-3-21**

### 3-17. Switch (Only for TLP451/651)

1. Remove two screws (1) and remove the base plate (2).
2. Remove one screw (3) and remove the switch (4).

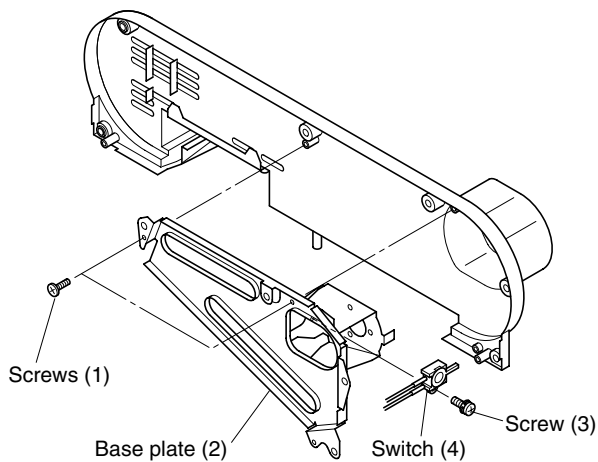


Fig. 1-3-22

### 3-19. Lamp PC Board (TLP451/651)

1. Remove the lamp cover (1).
2. Pull out the lamp PC board (2) in the arrow direction.
3. Unplug the connector (3).

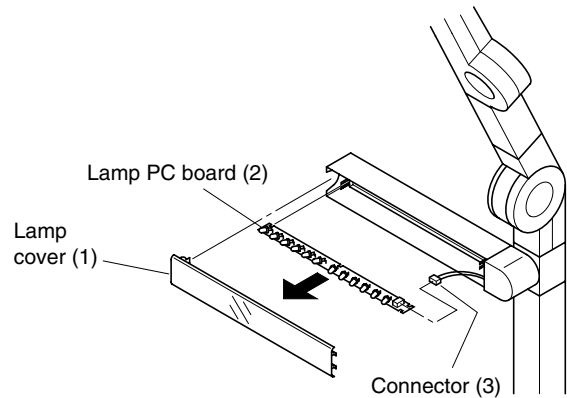


Fig. 1-3-24

### 3-18. Camera PC Board (Only for TLP451/651)

1. Remove four screws (1) and remove the cover (2).
2. Remove two connectors (3).
3. Remove two screws (4) and remove the camera block (5).
4. Remove the focus ring (6) by releasing the claws (A).
5. Remove two screws (7) and remove the camera base (9) from the camera PC board assembly (8).

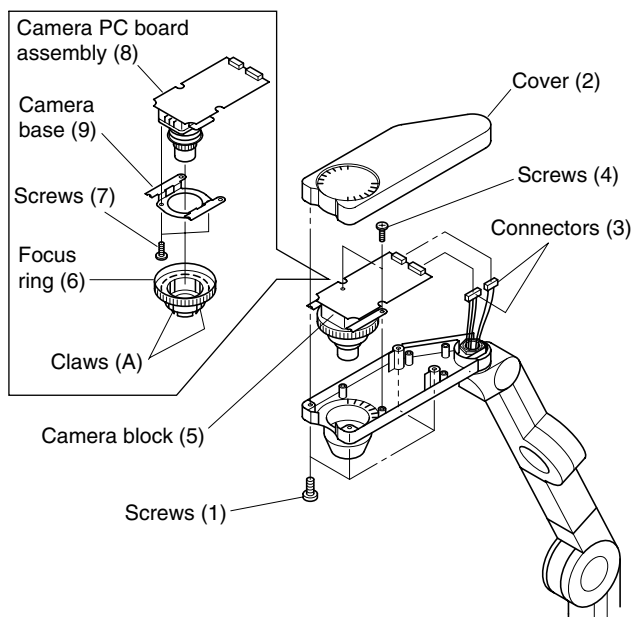


Fig. 1-3-23

## 4. ELECTRICAL ADJUSTMENT

### < Test Equipments and Test Jigs >

- Oscilloscope
- Digital voltmeter
- Adjustment software TLP65CTL5.EXE
- Color luminance meter (BM-5)
- Personal computer
- Signal generator
- Multi-point luminance meter

### < Connection and Setting of Personal Computer >

#### (1) Connection of personal computer

- 1) Connect a computer as shown in Fig. 1-4-1, and then perform the adjustment using the adjustment software TLP65CTL5.EXE. (When using a drive C, type C: ¥TLP65CTL5.EXE and press enter key.)

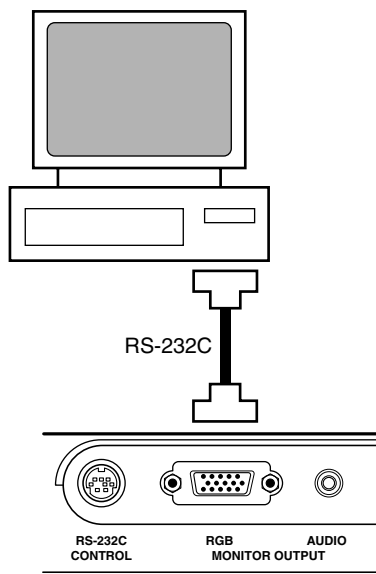


Fig.1-4-1

	AMP_GAIN	AMP_BIAS	GAM_WHP	GAM_B1P	GAM_B2P	GAM_WHG	GAM_B1G	GAM_B2G	SUB_CONT
R	W00	W03	W06	W09	W0C	W0F	W12	W15	VGR
G	W01	W04	W07	W0A	W0D	W10	W13	W16	VGG
B	W02	W05	W08	W0B	W0E	W11	W14	W17	VGB

DLY_CNT	GAM/TEST	POS_CONT1	POS_CONT2	DIR/INV
W18	W19	W1A	W1B	W1C

NRSH	CALR	BLKLIM	CLPLEV	BCOM	GCOM	RCOM	SIGCEN	NRSL	DIRX	DIRY
WM0	WM1	WM2	WM3	WM4	WM5	WM6	WM7	WM9	WMA	WMB

#### (2) Adjustment software usage

The electrical adjustment is carried out by using the adjustment software. For the adjustment command items in the adjustment procedures, set the command by referring the following contents.

First, start the software and select the "Drive" tab. Then the following display appears.

The screenshot shows the 'Drive' tab of the adjustment software. It features a 'Gamma' section with a 'Reset' button and a grid of radio buttons for parameters: AMP\_GAIN, AMP\_BIAS, GAM\_WHP, GAM\_B1P, GAM\_B2P, GAM\_WHG, GAM\_B1G, GAM\_B2G, and SUB\_CONT. Below this is another 'Drive' section with radio buttons for: NRSH, CALR, BLKLIM, CLPLEV, BCOM, GCOM, RCOM, SIGCEN, WM0, NRSL, DIRX, DIRY, WM6, WM7, VRL, and VRH. At the bottom, there are 'Send CMD' and 'Receive CMD' buttons.

Fig. 1-4-2

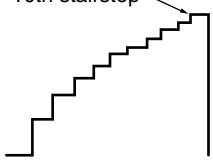
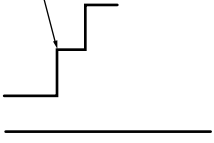
The adjustment command setting enables to be carried out by clicking radio button(s) on this screen. The following list shows the adjustment command setting. By referring to the list, set the adjustment command.

- Save the data in each step.

( ) : confirmation only.

**1-12**

Table 1-4-2


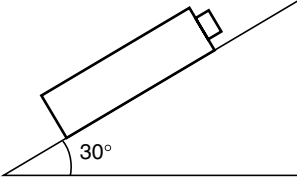
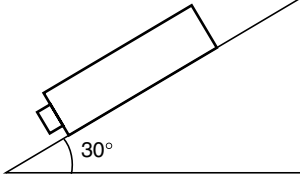
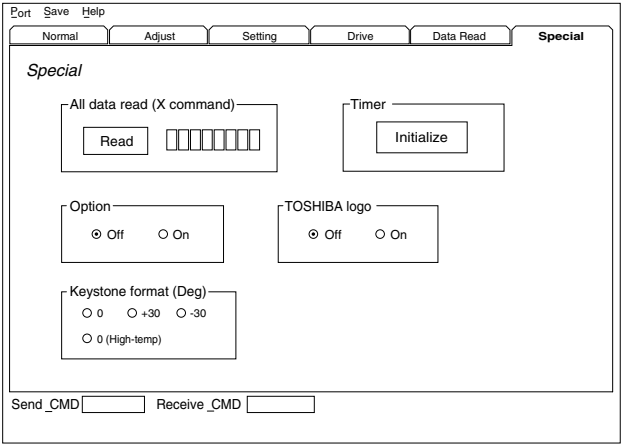
Adjust Items	Input Signal	Test Equipment	Test Point	Adjust mode	Adjust Value	Note
<b>5. Gamma correction at video input</b> 5-1. Video bias adjustment	10-stairstep waveform	Oscilloscope	TP402 (R) TP502 (G) TP602 (B)	W03 W04 W05	<ul style="list-style-type: none"> <li>Adjust the 10th stairstep waveform for following values: <math>5.3 \pm 20 \text{ mV}</math></li> </ul>	 <ul style="list-style-type: none"> <li>Trigger the scope at TP901 (H period).</li> </ul>
5-2. Video black gamma adjustment	10-stairstep waveform	Oscilloscope	TP402 (R) TP502 (G) TP602 (B)	W0C W0D W0E	<ul style="list-style-type: none"> <li>Adjust the second stairstep waveform for following values: <math>2.75 \pm 20 \text{ mV}</math></li> </ul>	 <ul style="list-style-type: none"> <li>Trigger the scope at TP901 (H period).</li> </ul>
5-3. Ghost adjustment	Retma signal	—	—	(W1A)	<ul style="list-style-type: none"> <li>If ghost is high, adjust in W1A mode.</li> </ul>	
<b>6. Common voltage adjustment</b> 6-1. Common voltage adjustment 1	Adjustment signal	Oscilloscope, confirm on the screen.	—	WM4 WM5 WM6	<ul style="list-style-type: none"> <li>Select "Standard" in Projection mode on "Setting" menu.</li> <li>Adjust so that the flicker for each R, G, B signal becomes minimum.</li> </ul>	
6-2. Common voltage adjustment 2	Adjustment signal	Oscilloscope, confirm on the screen.	—	WM4 WM5 WM6	<ul style="list-style-type: none"> <li>Invert Up/Down contents displayed on the screen.</li> <li>Select "Rear Ceiling" in Projection mode on "Setting" menu.</li> <li>Adjust so that the flicker for each R, G, B signal becomes minimum.</li> <li>After adjustment, click the standard button (PJ0) on the setting screen and return to the standard status.</li> </ul>	

**Table 1-4-3**

Adjust Items	Input Signal	Test Equip-ment	Test Point	Adjust mode	Adjust Value	Note
<b>7. White balance adjustment</b>	All white 50% signal 10-stairstep video signal 16-stairstep RGB signal	Color luminance meter (BM-5)	Shown below	W03 W04 W05	• Shown below.	
	<p>1. Lay the unit in a dark room and input all white 50% signal, video 10-stairstep signal or RGB 16-stairstep signal.</p> <p>2. Affix the standard white board WS-2 on the top center of screen, or suspend it adjacent to the screen from above.</p> <p>3. Set the color luminance meter (BM-5) with more than 30 min. heat-run operation performed, so that color temperature on the WS-2 can be measured.</p> <p>4. Measure the color temperature by using the BM-5 and adjust with W03 and W05 in the adjustment menu to obtain the value within the range of <math>X = 0.285 \pm 0.01</math> and <math>Y = 0.310 \pm 0.01</math>.</p> <p>Adjustment standard</p> <p>a. Adjust Y by using in W05 mode.</p> <p>b. Adjust X by using in W03 mode.</p> <p>Color temperature: 8500</p> <p>duv...less than 0.005</p> <p>5. Input all white 100% signal.</p> <p>Measure the luminance and the color temperature and record them.</p> <p>6. Perform the steps 1 to 4 for the video input.</p> <p>7. Enter 16 steps at RGB input and 10 steps at Video input. Then check the color temperature on black side and adjust W0C and W0E if required. (Adjustment range should be within <math>\pm 3</math> steps.)</p>					
<b>8. White level adjustment at RGB input</b>	Window signal with center 98% and peripheral 100%.	—	—	W03 W04 W05	• Adjust W03, W04 and W05 in the same way (modifying the same data amount) so that 98% white appears a little.	

- Perform the following adjustment when replacing the main PC board (PB9061) and/or the microprocessor QXXX.

**Table 1-4-4**

Adjust Items	Input Signal	Test Equipment	Test Point	Adjust mode	Adjust Value	Note
9. Slantness sensor correction data setting	—	—	—	—	—	
	<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p><b>Fig. 1</b></p> </div> <div style="text-align: center;">  <p><b>Fig. 2</b></p> </div> <div style="text-align: center;">  <p><b>Fig. 3</b></p> </div> </div> <ol style="list-style-type: none"> <li>1. Leave the unit for more than 3 hours to cool down enough.</li> <li>2. Connect TLP450/451/650/651 to a personal computer by using a RS-232 cable. Set TLP450/451/650/651 in the standby status.</li> <li>3. Start the slantness sensor correction data setting software (menu) on the personal computer.</li> </ol> <div style="text-align: center; margin: 10px 0;">  <p><b>Fig. 4</b></p> </div> <ol style="list-style-type: none"> <li>4. Place TLP450/451/650/651 to be adjusted horizontally on a flat table and click "0" of keystone format (Deg) on the menu and store the data at the horizontal position. (Refer to Fig. 1.)</li> <li>5. Place TLP450/451/650/651 to be adjusted on a table with 30 degrees slanted and its projection lens directed upward. Then click "+30" of keystone format (Deg) on the menu and store the data of +30 degrees position. (Refer to Fig. 2.)</li> <li>6. Place TLP450/451/650/651 to be adjusted on a table with 30 degrees slanted and its projection lens directed downward. Then click "-30" of keystone format (Deg) on the menu and store the data of -30 degrees position (Refer to Fig. 3.). At this time, the data is written on the flash ROM of the TLP450/451/650/651.</li> <li>7. After heat-running for more than 1 hour with the power turned on, place TLP450/451/650/651 horizontally and click "0 (High-temp)" of keystone format (Deg) to save the horizontal position data at high temperature.</li> <li>8. Stretch the height adjusting legs on the front side of TLP450/451/650/651 fully, turn on the projector and start projecting on the screen. Adjust the focus roughly and push the automatic keystone button on the remote controller. Check to see the image projected is more rectangular with less trapezoidal in comparison with the shape before pushing the keystone button.</li> </ol>					



## 5. LED DISPLAY

X: Lighting off, Color: Contents shown by lighting in the color, (Color): Contents shown by blinking in the color

**Table 1-5-1 Normal operation**

Status	Power	Lamp	Temp	Contents	Remarks	Additional notice
Normal	Orange	X	X	Standby status	At normal power off	
Normal	Green	X	X	Power on	Various power on	
Normal	Green	(Green)	X	Lamp is heating up.	Lamp power is being confirmed.	
Normal	Green	Green	X	Lamp lighting	At normal power on	
Normal	Orange	Green	X	Power off	Various power off	
Normal	Orange	(Green)	X	Lamp is cooling down.	For approx. 1 min. (Impossible to light on again.)	

**Table 1-5-2 Error operation**

Status	Power	Lamp	Temp	Contents	Remarks	Additional notice
Error	Red	X	X	Main power error	Only at power on.	
Error	Red	Red	X	Lamp not lighting	Only at power on.	
Error	Red	Orange	X	Lamp fan stop	Only at power on.	Operation is carried out below 30 °C in the old control.
Error	Red	X	(Red)	Suction fan stop	Only at power on.	Operation is carried out below 30 °C in the old control.
Error	Red	X	(Orange)	Exhaust fan stop	Only at power on.	Operation is carried out below 30 °C in the old control.
Error	Red	X	(Green)	Filter open	Only at power on.	Not used in the current control.
Error	Red	X	Red	Temperature sensor 1 abnormality	Only at power on.	
Error	Red	X	Orange	Temperature sensor 2 abnormality	Only at power on.	

# SECTION 2

## SERVICING DIAGRAMS

### 1. PART CONFIGURATION AND THEIR SYMBOLS

#### 1-1. Replacing Subminiature "CHIP" Parts

##### 1-1-1. Required Tools:

1. Fine tipped, well insulated soldering "pencil", about 30 Watts.
2. Tweezers.
3. Blower type hair dryer.

##### 1-1-2. Soldering Cautions:

1. Do not apply heat for more than 3s.
2. Avoid using a rubbing stroke when soldering.
3. Discard removed chips; do no reuse them.
4. Supplementary cementing is not required.
5. Use care not to scratch or otherwise damage the chips.

##### 1-1-3. Removal (Resistors, Capacitors, etc.):

1. Melt the solder at one side.

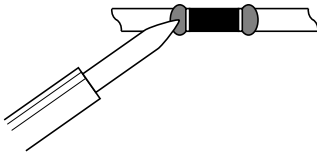


Fig. 2-1-1

2. Grasp the part with tweezers and melt the solder at the other side.

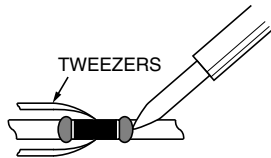


Fig. 2-1-2

3. Remove the part with a twisting motion.

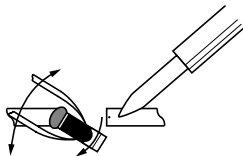


Fig. 2-1-3

##### 1-1-4. Removal (Transistors, Diodes, etc.):

1. Melt the solder of one lead.

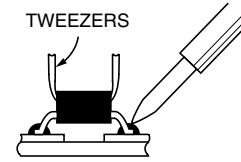


Fig. 2-1-4

2. Lift the side of that lead upward.

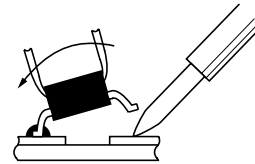


Fig. 2-1-5

3. Simultaneously heat solder the two remaining leads and lift part to remove.

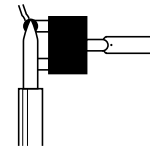


Fig. 2-1-6

##### 1-1-5. Preheating (Except for semiconductors):

Immediately before installing new resistors or capacitors, use a blower type hair dryer and preheat the part for about two min. at approximately 150°C.

##### 1-1-6. Replacement:

1. Presolder the contact points of the circuit pattern.

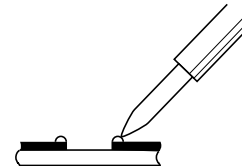


Fig. 2-1-7

2. Press the part downward with tweezers and apply the soldering pencil as indicated in the figure.

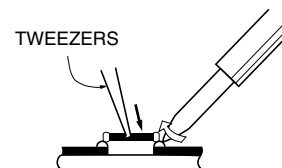


Fig. 2-1-8

## 1-2. Precautions for Part Replacement

- In the schematic diagram, parts marked  $\triangle$  (ex.  $\triangle$  F801) are critical part to meet the safety regulations, so always use the parts bearing specified part codes (SN) when replacing them.
- Using the parts other than those specified shall violate the regulations, and may cause troubles such as operation failures, fire etc.

## 1-3. Solid Resistor Indication

<b>Unit</b>	None ..... $\Omega$ k ..... $k\Omega$ M ..... $M\Omega$
<b>Tolerance</b>	None ..... $\pm 5\%$ B ..... $\pm 0.1\%$ C ..... $\pm 0.25\%$ D ..... $\pm 0.5\%$ F ..... $\pm 1\%$ G ..... $\pm 2\%$ K ..... $\pm 10\%$ M ..... $\pm 20\%$
<b>Rated Wattage</b>	(1) Chip Parts None ..... 1/16W (2) Other Parts None ..... 1/6W Other than above, described in the Circuit Diagram.
<b>Type</b>	None ..... Carbon film S ..... Solid R ..... Oxide metal film W ..... Metal film W ..... Cement FR ..... Fusible

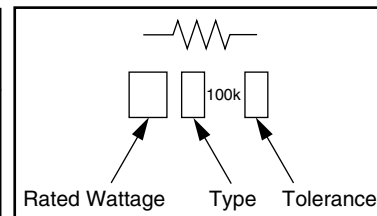


Fig. 2-1-9

## 1-4. Capacitance Indication

<b>Symbol</b>	$\dashv \vdash^{\pm}$ ..... Electrolytic, Special electrolytic $\dashv \vdash^{NP}$ ..... Non polarity electrolytic $\dashv \vdash$ ..... Ceramic, plastic $\dashv \vdash^M$ ..... Film $\dashv \vdash^{\wedge}$ ..... Trimmer
<b>Unit</b>	None ..... F $\mu$ ..... $\mu F$ p ..... pF
<b>Rated voltage</b>	None ..... 50V For other than 50V and electrolytic capacitors, described in the Circuit Diagram.
<b>Tolerance</b>	(1) Ceramic, plastic, and film capacitors of which capacitance are more than 10 pF. None ..... $\pm 5\%$ or more B ..... $\pm 0.1\%$ C ..... $\pm 0.25\%$ D ..... $\pm 0.5\%$ F ..... $\pm 1\%$ G ..... $\pm 2\%$ (2) Ceramic, plastic, and film capacitors of which capacitance are 10 pF or less. None ..... more than $\pm 5\%$ pF B ..... $\pm 0.1$ pF C ..... $\pm 0.25$ pF (3) Electrolytic, Trimmer Tolerance is not described.
<b>Temperature characteristic (Ceramic capacitor)</b>	None ..... SL For others, temperature characteristics are described. (For capacitors of 0.01 $\mu F$ and no indications are described as F.)

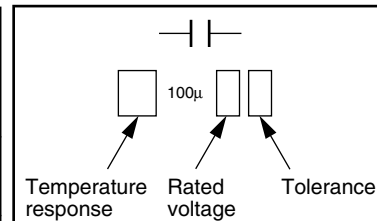
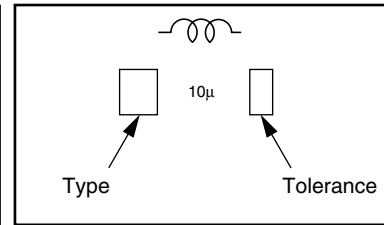


Fig. 2-1-10

## 1-5. Inductor Indication

Unit	None ..... H μ ..... μH m ..... mH
Tolerance	None ..... ±5% B ..... ±0.1% C ..... ±0.25% D ..... ±0.5% F ..... ±1% G ..... ±2% K ..... ±10% M ..... ±20%
Type	PL ..... Peaking For other, model name is described.



**Fig. 2-1-11**

## 1-6. Waveform and Voltage Measurement

- Measurement of waveform and voltage at each section in the color circuits was conducted with sufficient service color bar signal being received and reproduced in normal conditions.
- Waveforms and voltage values for the remaining circuit were measured with a broadcasting signal normally received, so they may vary slightly according to the programs being received. Use them as a measure for servicing.
- All voltage values except the waveforms are expressed in DC and measured by a digital voltmeter.

## 2. EACH SIGNAL FLOW

### 2-1. Operation at RGB Signal Input

The RGB signal is entered from PB001 on the RGB PC board and sent to the main PC board after passing through the MUTE circuit and the low pass circuit. The low pass circuit is provided to prevent a moire from occurring when the real sampling operation is not executed. Usually, a selector selects a signal not passed through the low pass filter, but selects the signal passed through the low pass filter since the real sampling is not carried out for a signal higher than SXGA85 Hz. The RGB signal entered passes through a buffer and develops PB003.

In the main PC board, the RGB input signal is converted to a digital signal in A/D+PLL (QD300). The A/D converter is used in the parallel mode, so the output becomes 16 bits per 1 channel and its clock rate is a half of the sampling clock. The digital RGB signal is enlarged or reduced by the scaller (QD500) and converted into a format of fv=60Hz, panel resolution (TLP65x: 1024 x 768, TLP45x: 800 x 600). The scaller output signal is a RGB signal of 10 bits per 1 channel, converted into the analog signal by the D/A converter and fed to the drive circuit. The scaller (QD500) also performs the contrast/brightness control and keystone correction in addition to the enlargement or reduction process for the video signal entered.

The clock signal for the input system is generated in the A/D+PLL (QD300) and that for LCD panel drive system is in the 2nd PLL (QD402) circuit.

In the drive circuit, the pre-driver circuit amplifies the signal and performs a gamma correction. The correction signal sent from the color uniformity correction IC (Q971) enters the BIAS control terminal of the pre-driver (Q701) and the color uniformity is corrected by entering the correction signal corresponding to the screen position of the input signal. The signal corrected in the gamma is inverted its polarity and sampled & held in six phase signals by the sample & hold IC (Q401, Q501, Q601) and then fed to the LCD panel. The XGA panel used for TLP650/651 employs 12 phase driving system, so two sample & hold ICs are used per one channel. (Since TLP450/451 employs 6 phase driving system, one sample & hold IC is used per one channel.)

The panel driving timing signal is generated in the timing generator IC (Q203) with a clock signal and HD/VD signal supplied from the digital circuit. The Up/Down and Left/Right display inversion on the LCD panel (for ceiling mounting and rear projection status) is carried out by changing the timing signal generated by the timing generator. The timing signal used for this LCD panel requires a 15V in the amplitude, so the signal is converted into the timing signal of 15V amplitude by the level shifter and drives the LCD panel. The drive circuit operation is carried out in the same way regardless of the kinds of input signals. So the operation description for other input signals is omitted.

### 2-2. Video Signal

The video signals, S-video and composite video signals, are sent to the main PC board in passing through the input PC board through the connector and the buffers.

The signal sent to the main PC board enters the video decoder IC (QD200) and the decoder develops 8 bit signal (27 MHz clock) multiplexed with the Y/Cb/Cr components. The signal switching between S-video and composite video signals is carried out by a selector built-in the video decoder. The Y/Cb/Cr signal input for the scaller IC are 8 bit Y signal + 8 bit Cb/Cr signal. The 8 bit Y/Cb/Cr signal (27 MHz) in QD405 is converted into a 16 bit Y signal + Cb/Cr signal (13.5 MHz) and enters the scaller IC. In the scaller IC, the digital matrix circuit converts the Y/Cb/Cr signal into the R/G/B signals.

After that, the signal process is carried out in the same way as those for the RGB signal input. That is, the keystone correction, enlargement/reduction process and contrast/brightness control are carried out and fed to the drive circuit.

The process relating to the sync is also carried by the video decoder IC and the clock signal for input system is also generated.

Furthermore, when the video signal of fv=50Hz, such as PAL signal, etc. enters, the panel drive operation is carried out by using the signal of fv=50Hz.

## **2-3. Operation at Y/Pb/Pr Signal and HDTV Signal Input**

Y/Cb/Cr signal (DVD player output) or HDTV signal enters from PB001 and reaches the A/D converter (QD100) for Y/Cb/Cr (Y/Pb/Pr) signal after passing through the low pass circuit. The A/D converter develops 16 bit signal of 8bit Y signal + 8bit Cb/Cr (Pb/Pr) and enters the scaller IC through the selector for the signal and that from the video decoder inside QD405. The process following to the scaller IC is the same as that of the video signal process.

The process relating to the sync process at Y/Cb/Cr signal (DVD player output) input (clock generation) is carried out by the video decoder and the clock generation at HDTV signal input is by the A/D+PLL (QD300).

## **2-4. Camera Input Operation**

A camera input enters the A/D converter for Y/Cb/Cr (Y/Pb/Pr) signal through an exclusive connector and is processed as a Y/Cb/Cr signal input. The camera signal is a Y/Cb/Cr signal of fh=11.8 kHz and fv=15 Hz.

The clock generation is carried out in the A/D+PLL (QD300).

## **2-5. Camera Overlay Signal**

The camera overlay signal usually enters the A/D converter for Y/Cb/Cr signal (Y/Pb/Pr) through an exclusive connector in the same way as that of camera input.

The A/D converter output enters QD405 and the red and blue components of the signal are extracted by the level slice circuit. Thus processed signal is converted into the signal synchronizing with the LCD panel output timing by using a memory (QD46). Then the signal is overlapped with the on-screen signal and the signal overlapped is fed to the on-screen signal input of the scaller IC, and overlapped with the main video output signal. At this time, the clock generation for overlay signal input system is carried out by the PLL circuit exclusive for the overlay.

As described above, the A/D converter for Y/Cb/Cr (Y/Pb/Pr) signal is used for the overlay signal input, so the signal which is usually processed by the A/D converter for Y/Cb/Cr (Y/Pb/Pr) signal, that is, Y/Cb/Cr signal (DVD player output), cannot be overlaid at the HDTV signal input.

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3. BLOCK DIAGRAMS

3-1. RGB Block Diagram

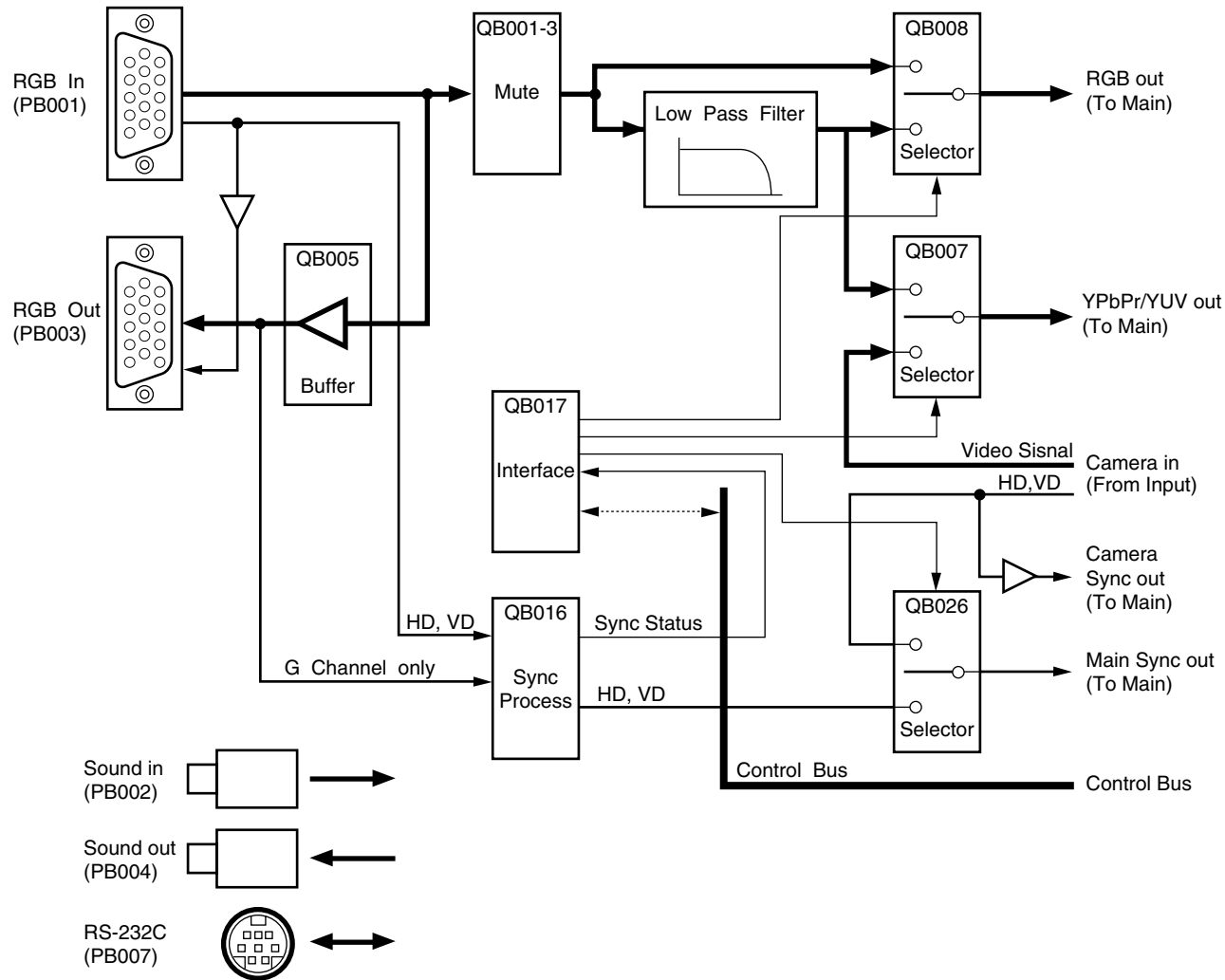


Fig. 2-3-1



3-2. Input Block Diagram

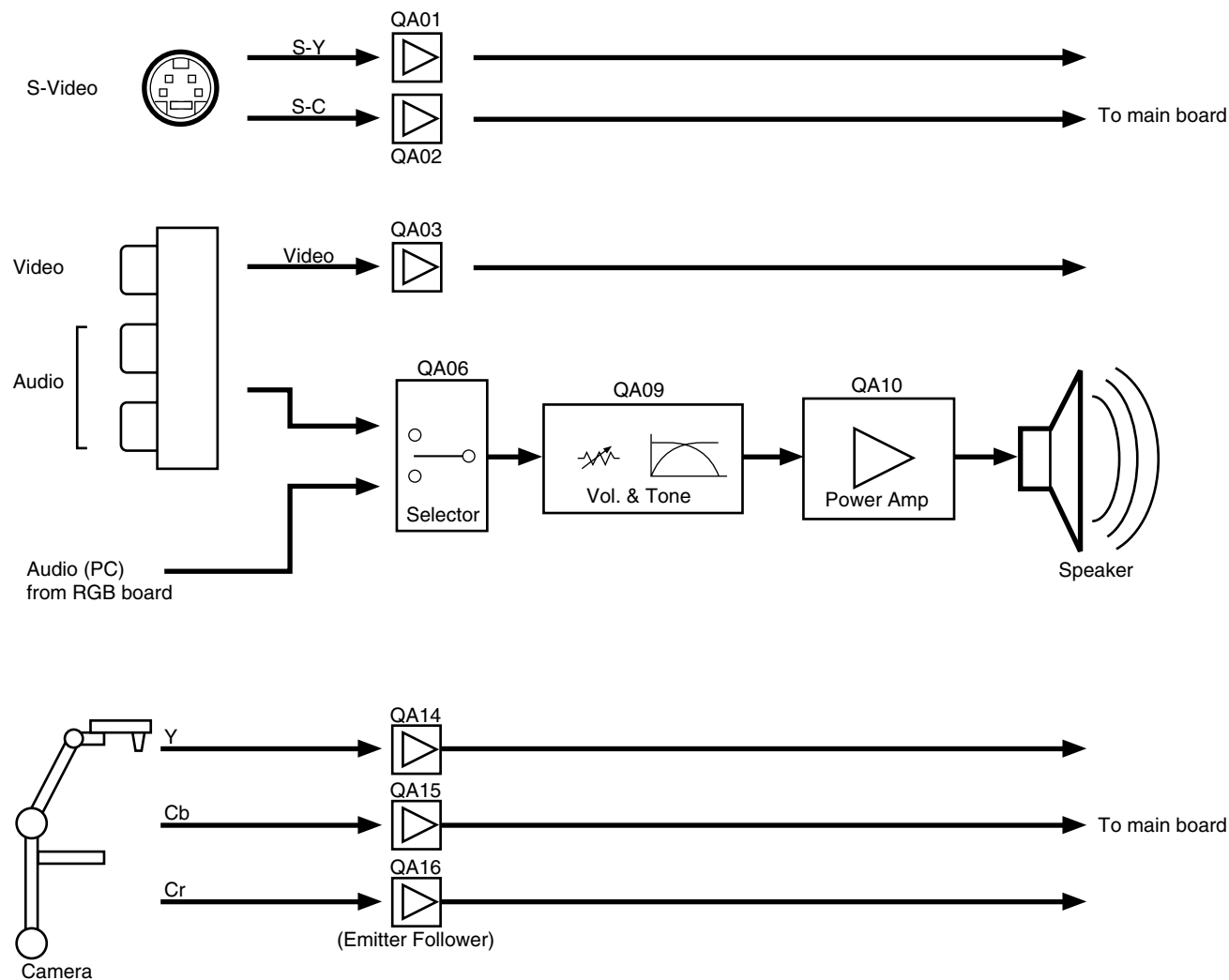


Fig. 2-3-2

3-3. Main Block Diagram

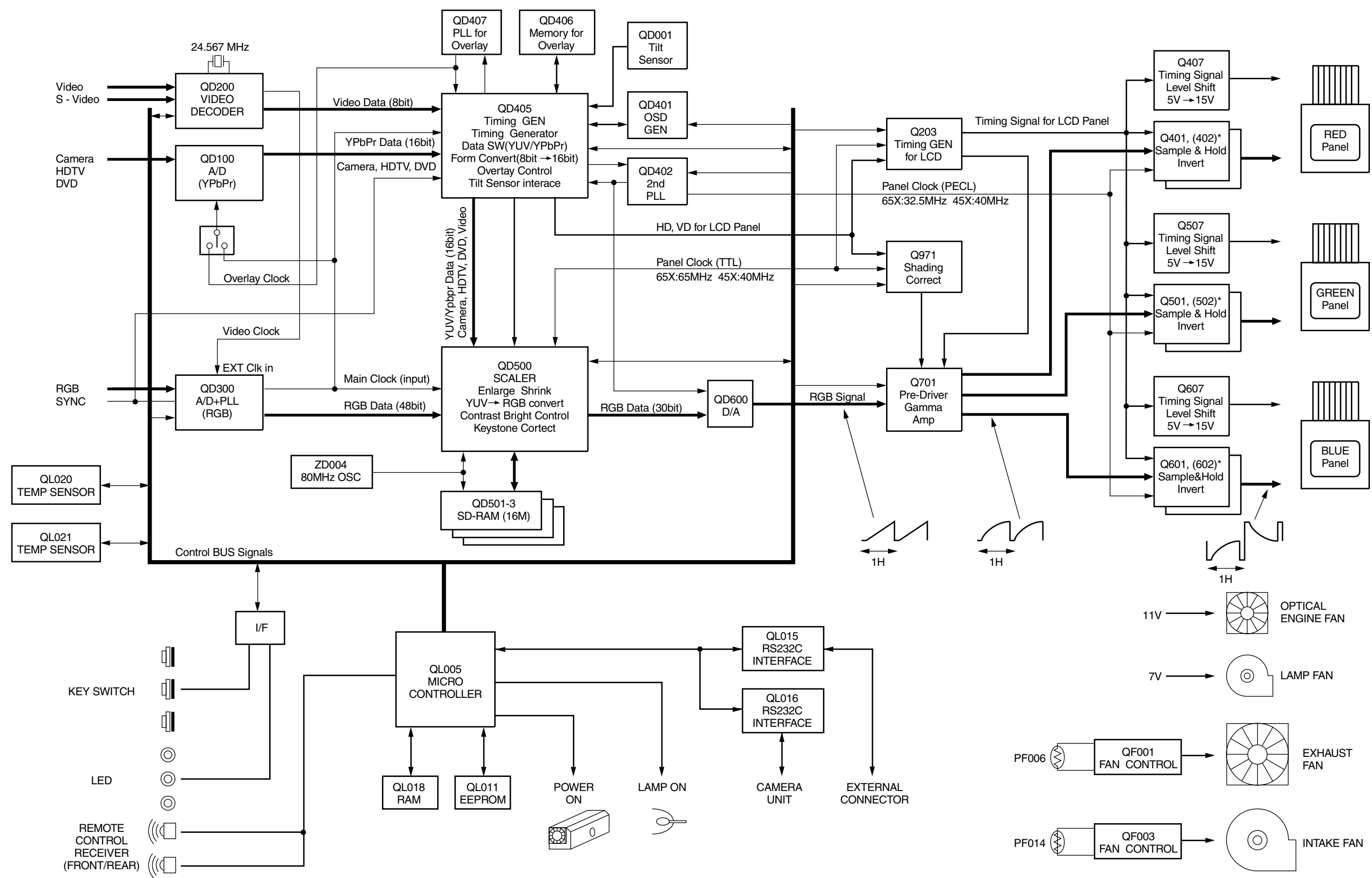


Fig. 2-3-3

3-3. Digital Block Diagram

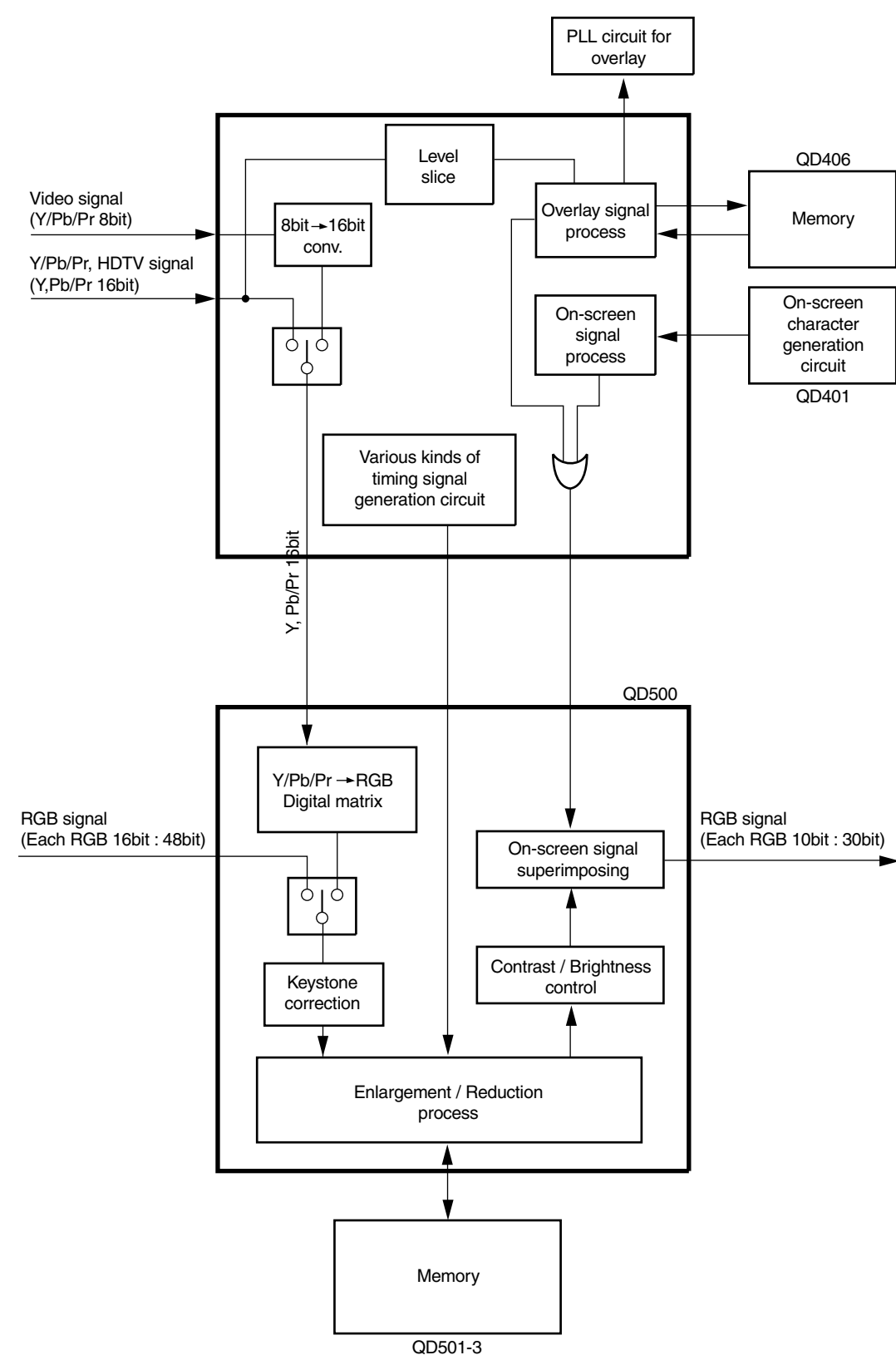


Fig. 2-3-4

# TLP650 WIRING



Fig. 2-4-1

5. CIRCUIT DIAGRAMS  
5-1. Drive Circuit Diagram (for TLP650, TLP651)

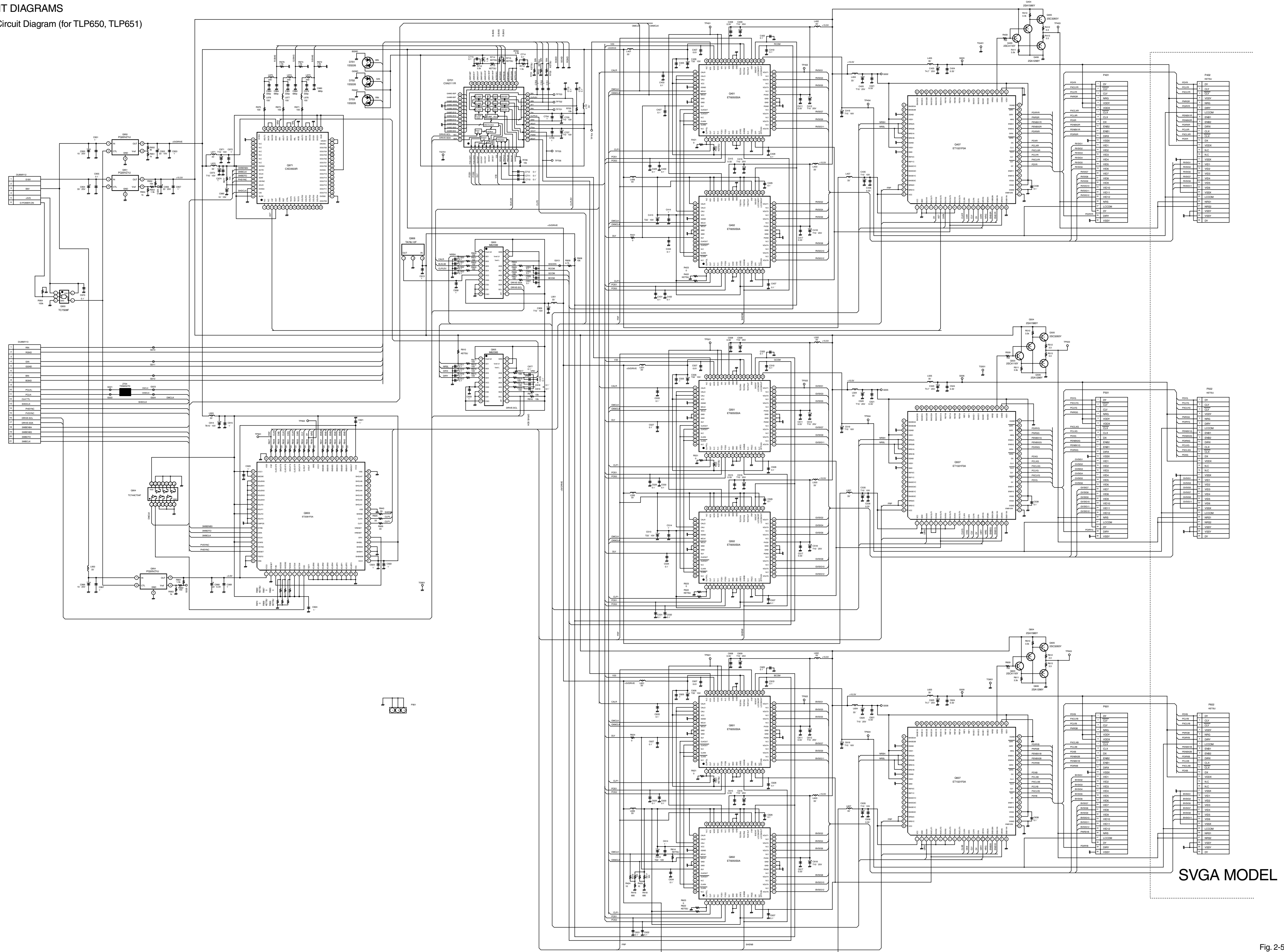
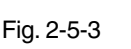


Fig. 2-5-1





## 2-30

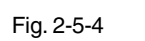




Fig. 2-5-5



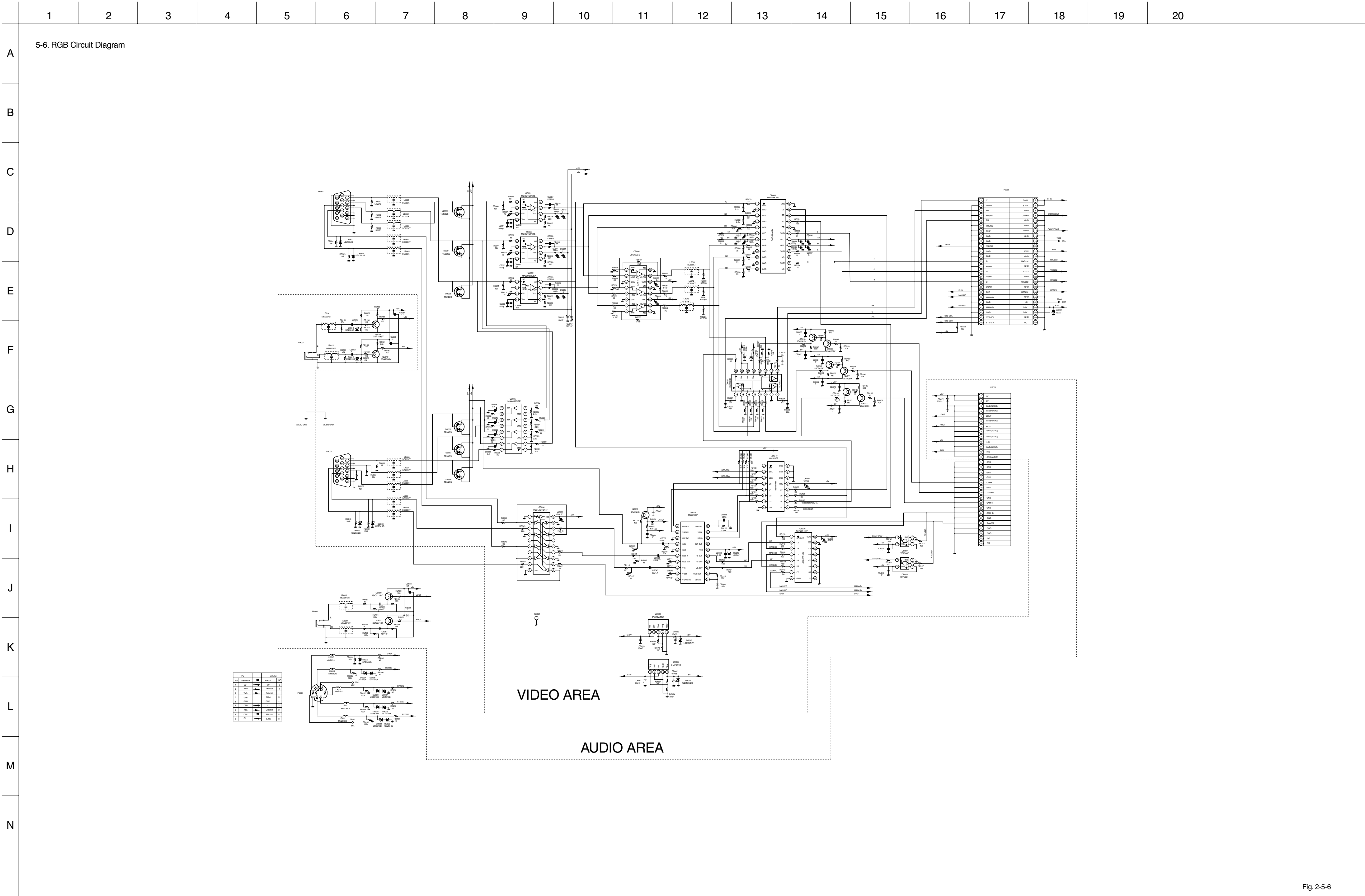


Fig. 2-5-6



1

2

3

4

5

6

7

8

9

10

A

B

C

D

E

F

G

## 5-9. Camera Interface Circuit Diagram

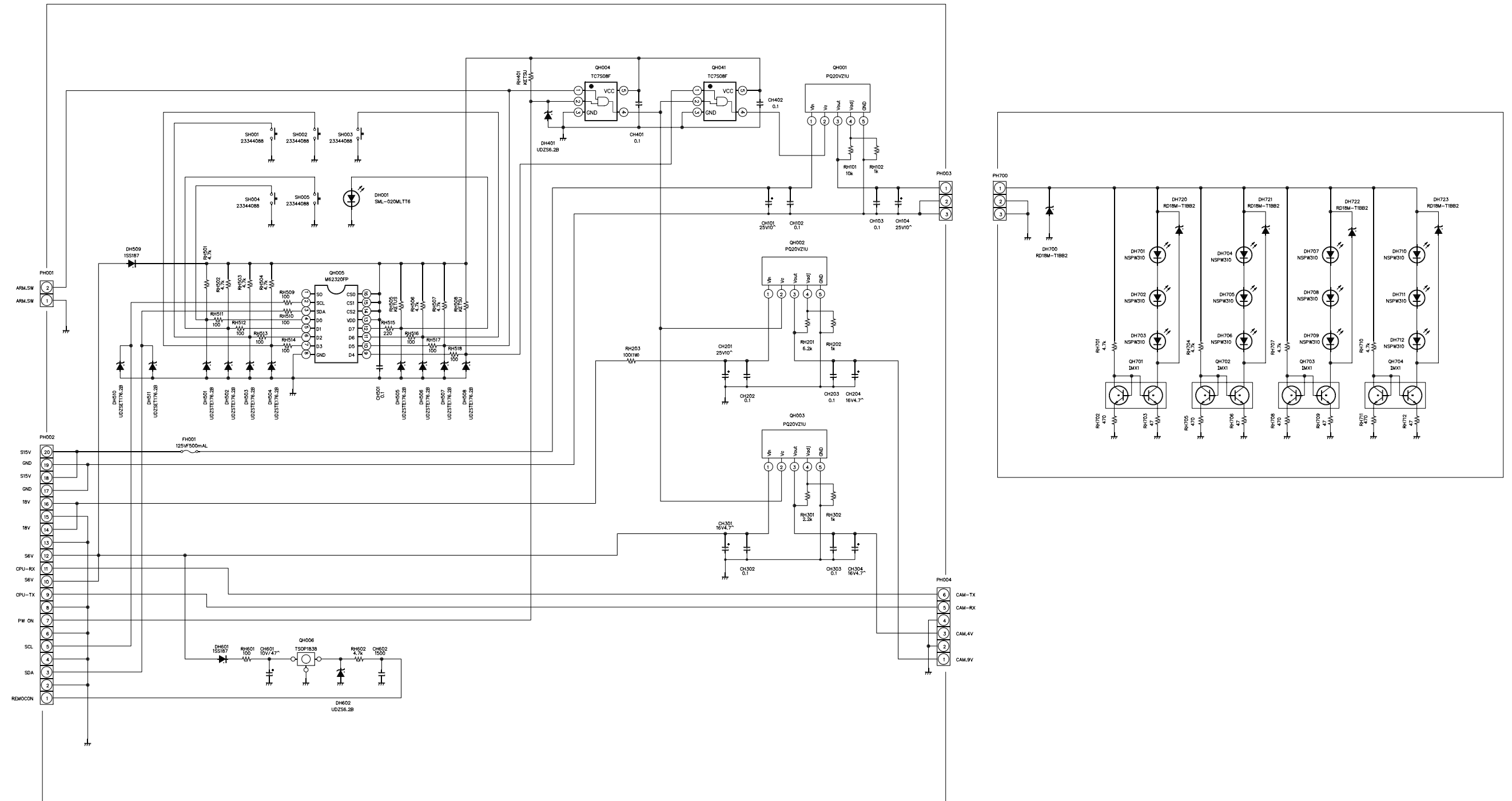
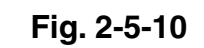


Fig. 2-5-9

# G



A

6. PC BOARDS

6-1. Input PC Board

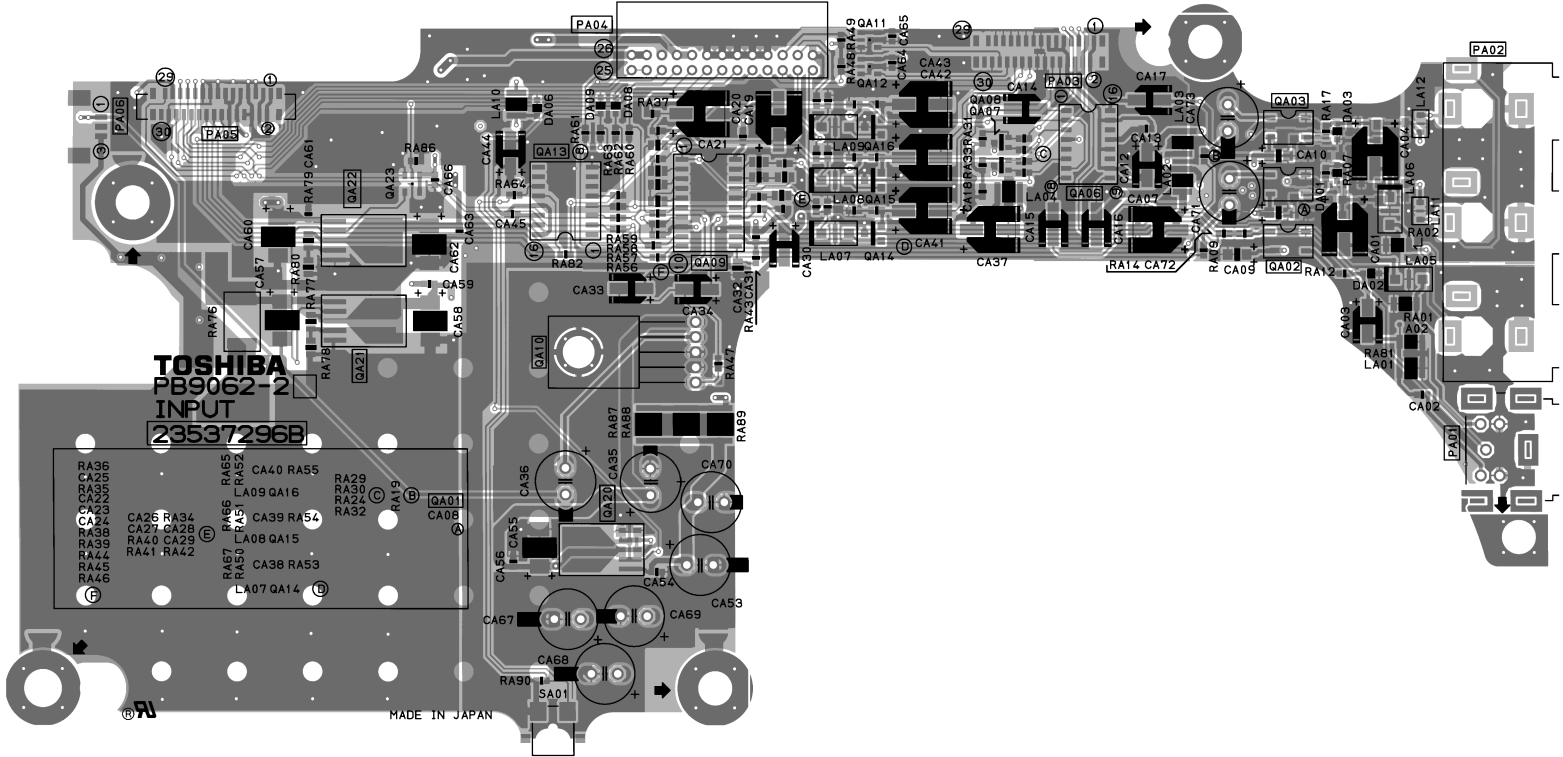


Fig. 2-6-1 U0022 Input PC Board (Top Side)

B

6-2. CAM Switch PC Board

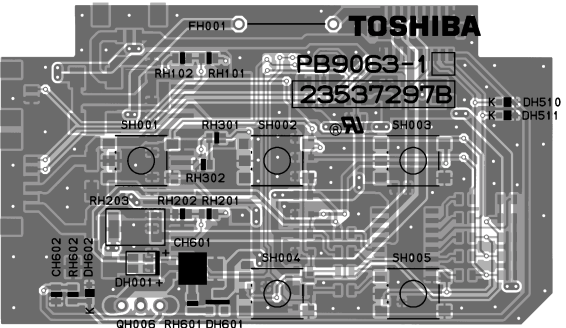


Fig. 2-6-3 U0031  
CAM Switch PC Board (Top Side)

C

D

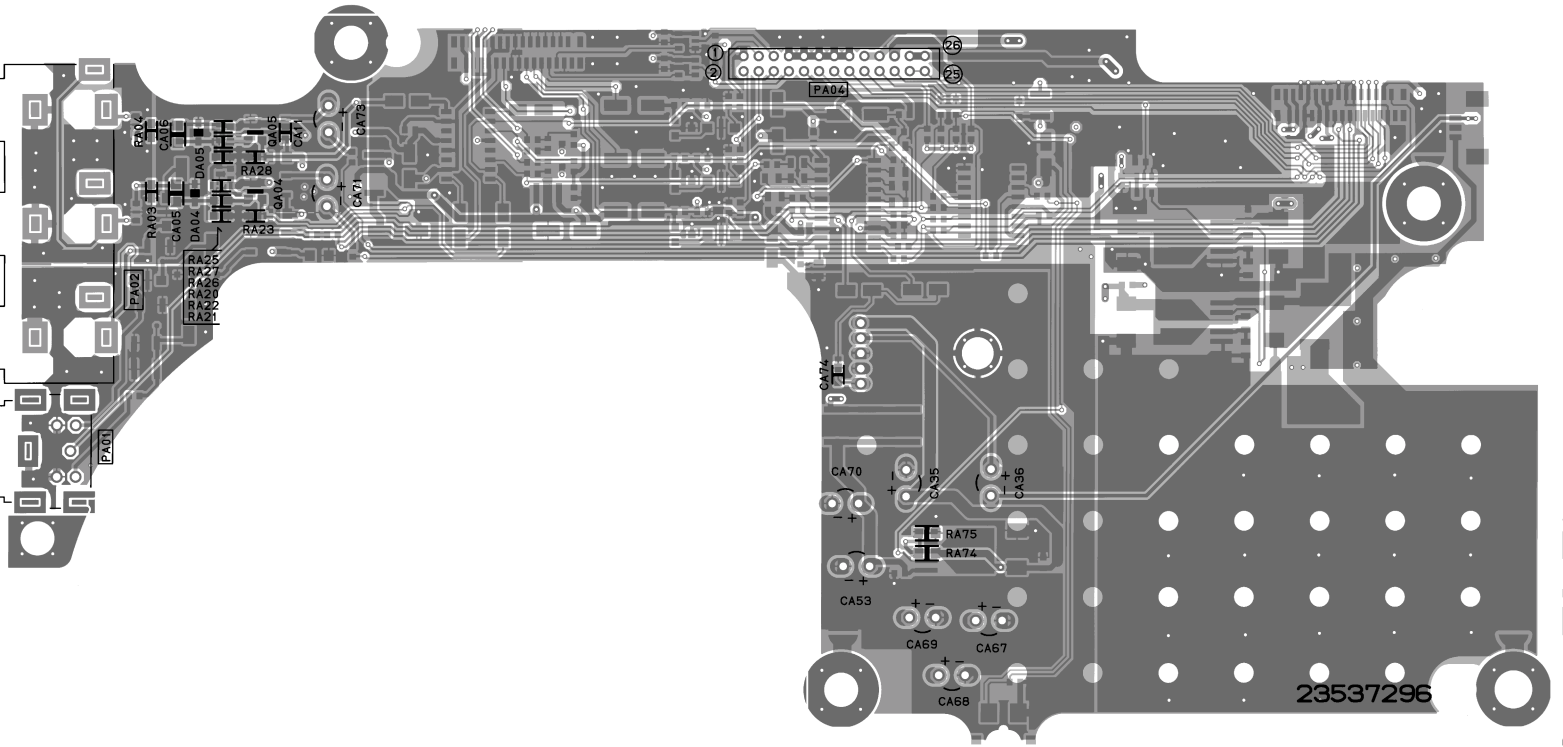


Fig. 2-6-2 U0022 Input PC Board (Bottom Side)

E

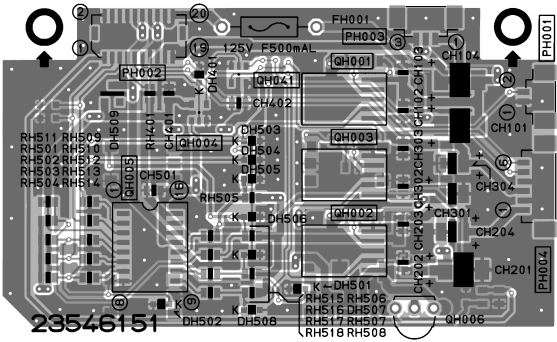


Fig. 2-6-4 U0031  
CAM Switch PC Board (Bottom Side)

F

G



1

2

3

4

5

6

7

8

9

10

A

## 6-3. Main PC Board

B

C

D

E

F

G

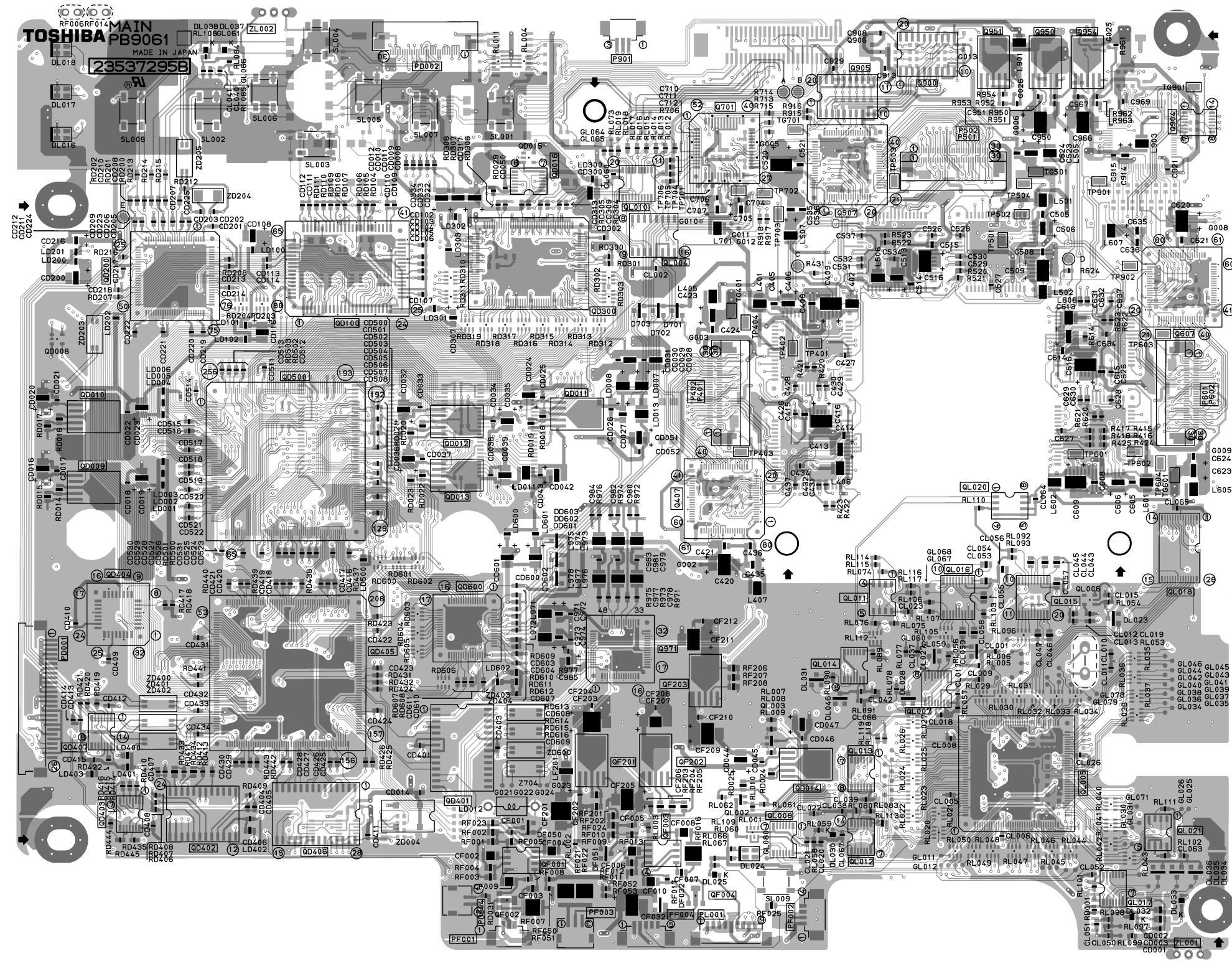


Fig. 2-6-5 U001 Main PC Board (Top Side)

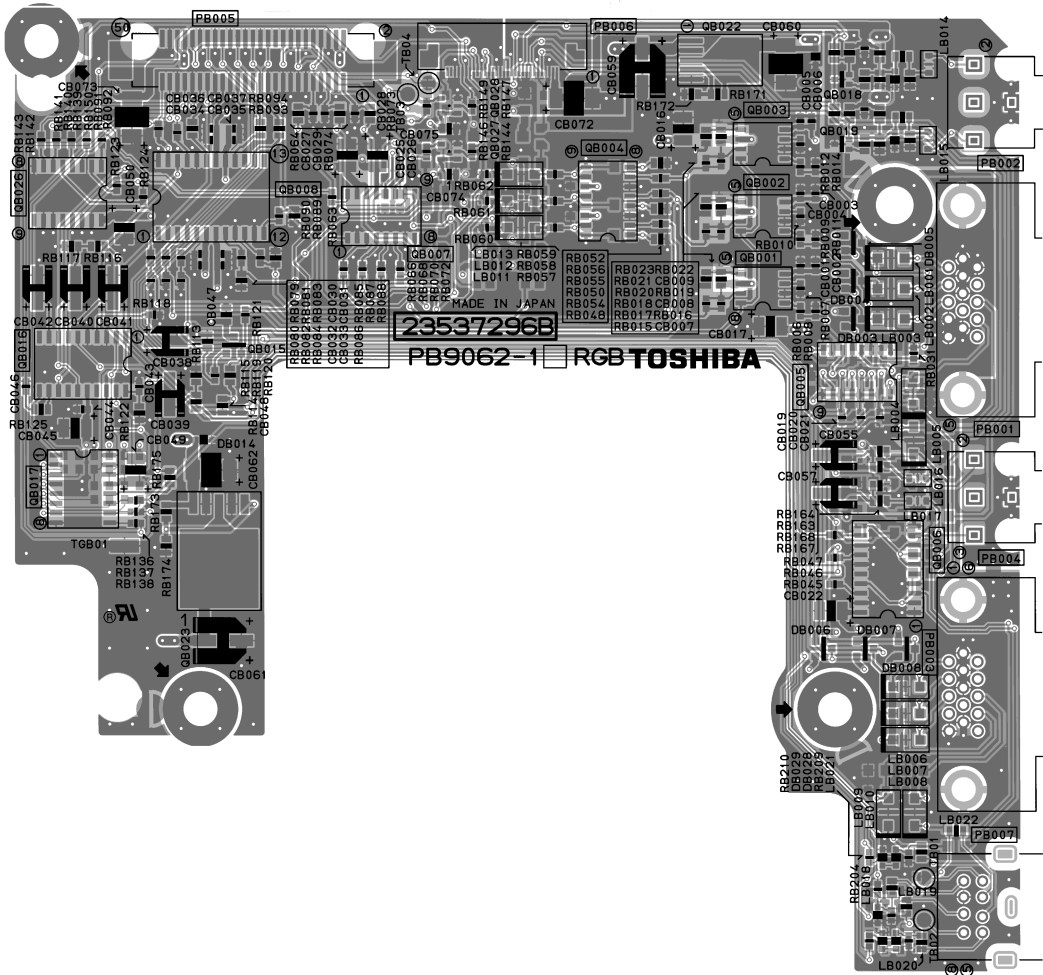


	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G										

Fig. 2-6-6 U001 Main PC Board (Bottom Side)

A

6-4. RGB PC Board



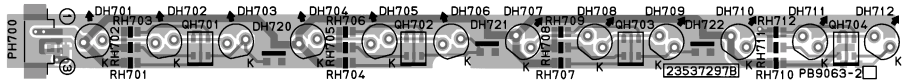
B

C

D

E

6-5. LED PC Board



F

G

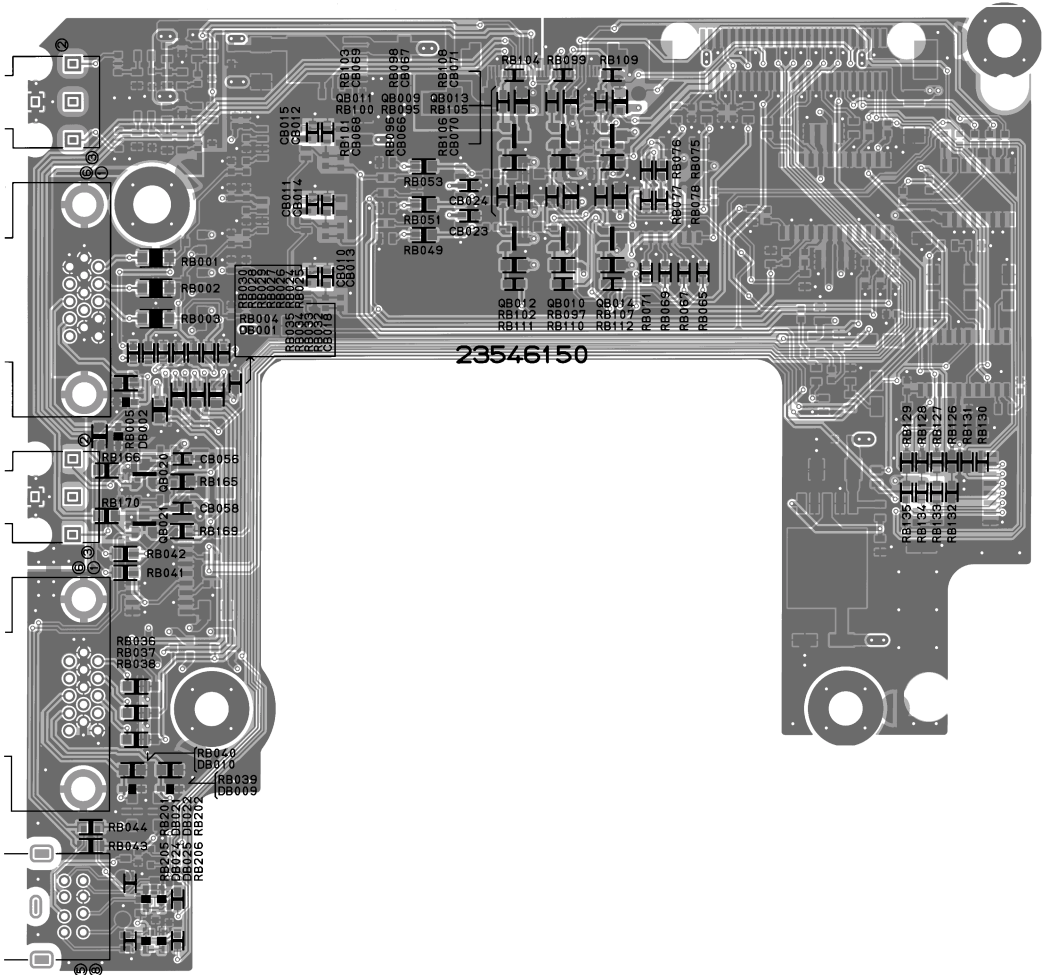


Fig. 2-6-8 U0021 RGB PC Board (Bottom Side)

6-6. Sub Digital PC Board

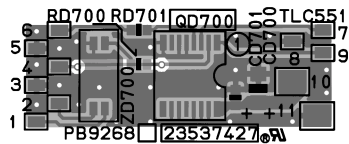


Fig. 2-6-11 U007 Sub Digital PC Board (Top Side)

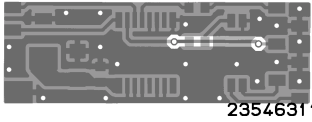


Fig. 2-6-12 U007 Sub Digital PC Board (Bottom Side)



# SECTION 3

## PARTS LIST

### SAFETY PRECAUTION

The parts identified by  $\triangle$  mark are critical for safety. Replace only with part number specified.

The mounting position of replacement is to be identical with originals.

The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

### NOTICE

The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

Parts marked # are of chip type and mounted on original PC boards.

However, when they are placed for servicing works, use discrete parts listed on the parts list.

### ABBREVIATIONS

#### 1. Integrated circuit (IC)

#### 2. Capacitor (Cap)

- Capacitance Tolerance (for Nominal Capacitance more than 10pF)

Table 3-2-1

Symbol	B	C	D	F	G	J	K	M	N
Tolerance %	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$	$\pm 5$	$\pm 10$	$\pm 20$	$\pm 30$

Symbol	P	Q	T	U	V	W	X	Y	Z
Tolerance %	+ 100 0	+ 30 - 10	+ 50 - 10	+ 75 - 10	+ 20 - 10	+ 100 - 10	+ 40 - 20	+ 150 - 10	+ 80 - 20

Ex. 10 $\mu$ F J = 10 $\mu$ F  $\pm 5\%$

- Capacitance Tolerance (for Nominal Capacitance 10pF or less)

Table 3-2-2

Symbol	B	C	D	F	G
Tolerance pF	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$

Ex. 10pF G = 10pF  $\pm 2$ pF

#### 3. Resistor (Res)

- Resistance tolerance

Table 3-3-1

Symbol	B	C	D	F	G	J	K	M
Tolerance %	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$	$\pm 5$	$\pm 10$	$\pm 20$

Ex. 470  $\Omega$  J = 470 $\Omega$   $\pm 5\%$

4. EXPLODED VIEWS

4-1. Packing Assembly

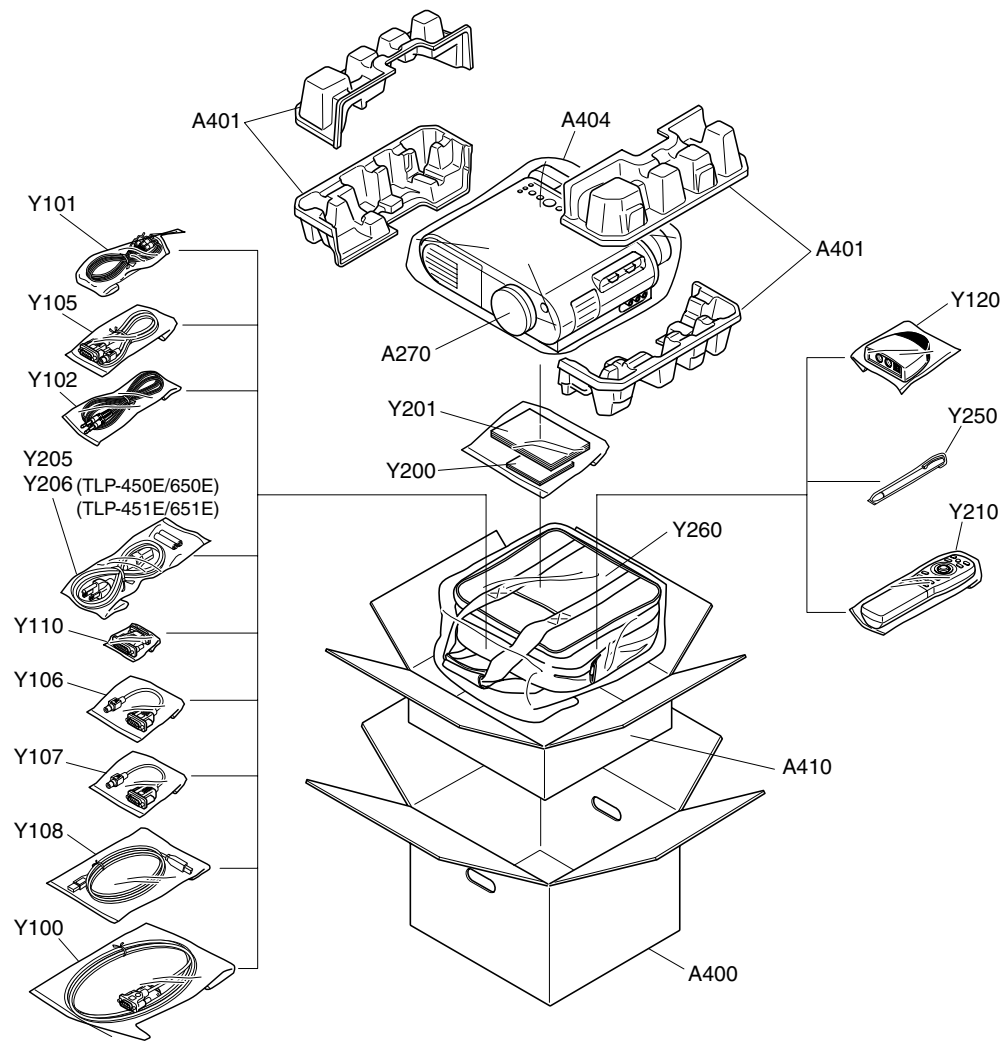


Fig. 3-4-1

4-2. Remote Control Unit

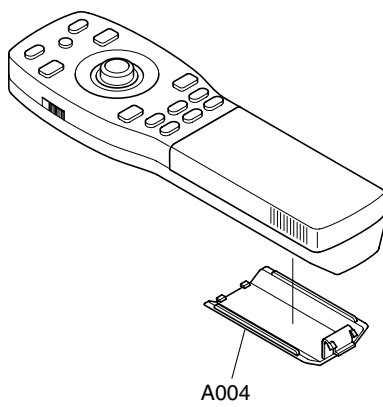
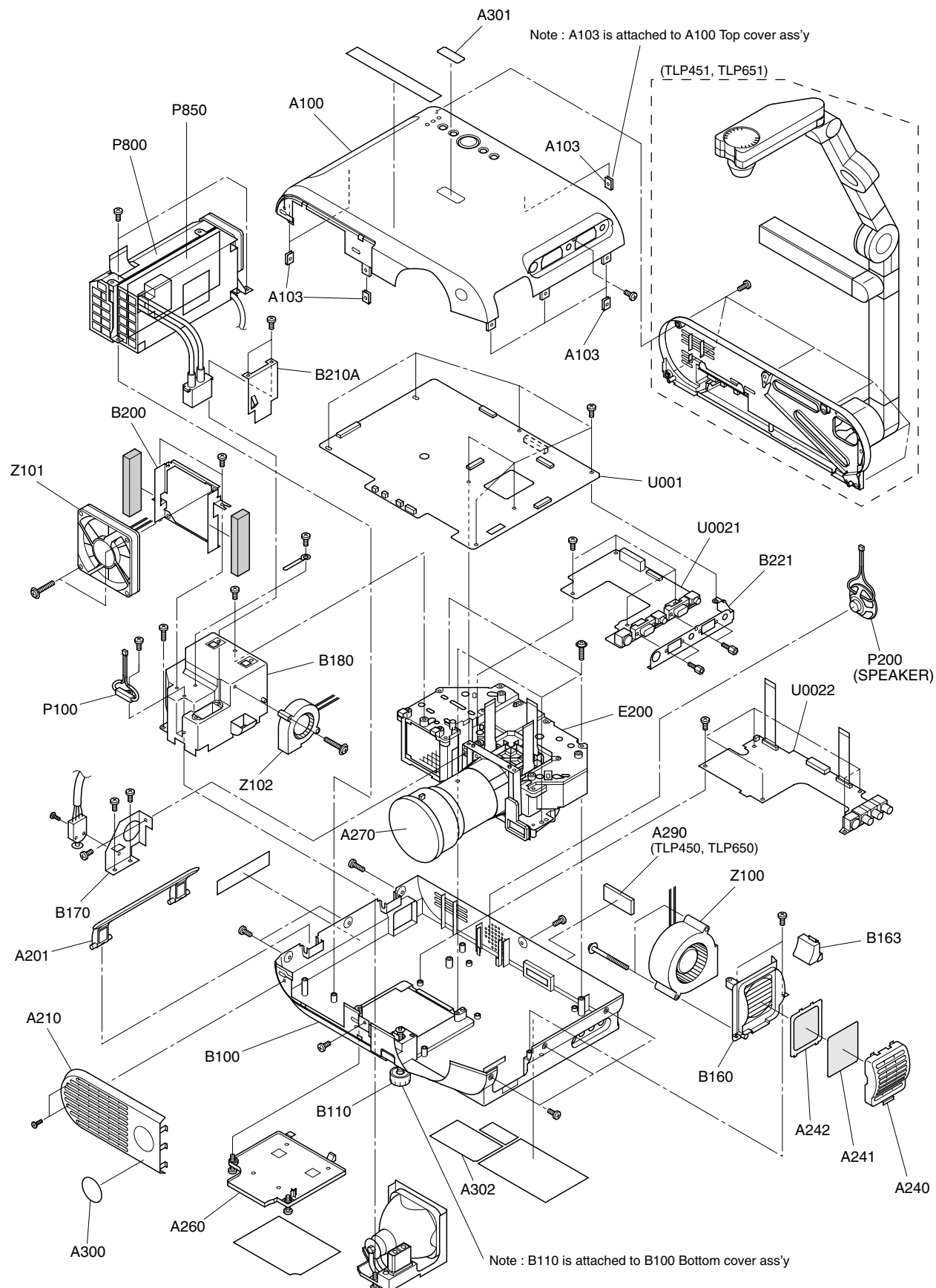


Fig. 3-4-2

### 4-3. Chassis Assembly



**Fig. 3-4-3**

4-4. Arm Assembly (TLP451,TLP651)

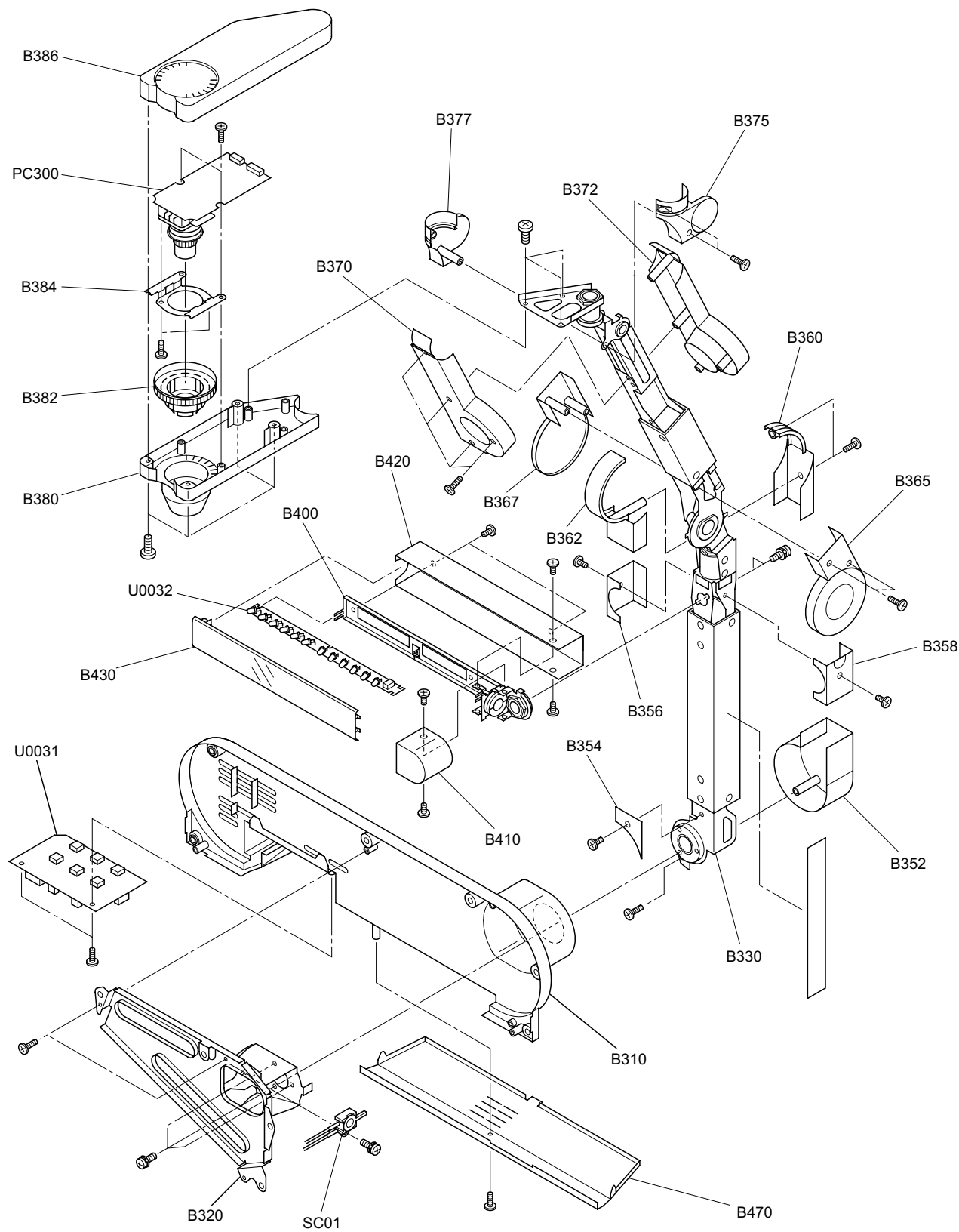


Fig. 3-4-4

## 5. PARTS LIST

LOCATION NUMBER	PART NUMBER	DESCRIPTION	LOCATION NUMBER	PART NUMBER	DESCRIPTION
- MECHANICAL PARTS -			△P100	23144598	Thermal Lead SW OHD3-105B
	A004	23588495 Case (Battery)	P200	23351150	Speaker
△A100	23549588	Top Cover Assy	△P800	23122374	Power Unit
A103	23747007	Nut	△P850	23122369	Lamp Power Unit
*b△A201	23436730	Handle	*c△PC300	23771010	Camera Block IKK81LC
*a△A201	23436737	Handle	*c SC01	23344401	Switch, Detect
△A210	23549571	Cover	△Y100	23368734	RGB Cable
△A240	23549572	Filter Cover	△Y101	23368732	A/V Cable
△A241	23466873	Air Filter	△Y102	23368733	Stereo Mini-cable
△A242	23466874	Air Filter	△Y105	23368676	Cable DSUB, 9P
△A260	23549589	Lamp Cover Assy	△Y106	23368677	Cable DIN4P-DSUB9P
△A270	23549574	Lens Cap	△Y107	23368718	Cable D-Sub, 9P
*d A290	23550810	Mask Sheet	△Y108	23368731	USB Cable
*e△A300	23550689	Front Tag	Y110	23368679	MAC Adaptor
*f△A300	23550690	Front Tag	Y120	23306333	Remote Control Receiver
*g△A300	23550793	Front Tag	△Y200	23563715	Owner's Manual (CD-ROM)*1
*h△A300	23550794	Front Tag	*i△Y201	23563712	Owner's Manual, English
△A301	23550693	Top Tag	*j△Y201	23563713	Owner's Manual, English
△A302	23550796	Label Rating (TLP450U)	*j△Y202	23563714	Owner's Manual, French/German
△A302	23550804	Label Rating (TLP450E)	*i△Y205	23176937	Power Cord 125V, 13A
△A302	23550795	Label Rating (TLP451U)	*j△Y205	23176002	Power Cord 250V
△A302	23550803	Label Rating (TLP451E)	*j△Y206	23372019	Power Cord 250V
△A302	23550692	Label Rating (TLP650U)	△Y210	23306332	Remote Control Unit
△A302	23550802	Label Rating (TLP650E)	Y250	23104032	Pointor
△A302	23550691	Label Rating (TLP651U)	Y260	23448559	Soft Case
△A302	23550801	Label Rating (TLP651E)	△Z100	23125487	Fan
A400	23064004	Case (TLP450U)	△Z101	23125873	Fan
A400	23064006	Case (TLP450E)	△Z102	23125874	Fan
A400	23064001	Case (TLP451U)	(Note)		
A400	23064003	Case (TLP451E)	*1:	English, French, German, Cantonese, Mandarin, Korean	
A400	23525996	Case (TLP650U)	*a:	TLP450, TLP451	
A400	23525998	Case (TLP650E)	*b:	TLP650, TLP651	
A400	23525966	Case (TLP651U)	*c:	TLP451, TLP651	
A400	23525995	Case (TLP651E)	*d:	TLP450, TLP650	
A401	23935919	Packing	*e:	TLP651	
*c A404	23945084	Cover	*f:	TLP650	
*d A404	23945088	Cover	*g:	TLP451	
A410	23918274	Accessory Box	*h:	TLP450	
△B100	23411238	Chassis Bottom Assy	*i:	TLP450U, TLP451U, TLP650U, TLP651U	
B110	23436731	Foot	*j:	TLP450E, TLP451E, TLP650E, TLP651E	
B160	23528039	Holder			
△B163	23421992	Fan Mouth Piece			
B170	23841490	Bracket			
△B180	23448560	Lamp House Assy			
B200	23841491	Bracket			
B210A	23936010	Plate			
B221	23841493	Bracket			
*c△B310	23549570	Cover Assy			
*c△B320	23890831	Base Assy			
*c B330	23890832	Arm Assy			
*c△B352	23549566	Cover			
*c△B354	23549567	Cover			
*c△B356	23549564	Cover			
*c△B358	23549565	Cover			
*c△B360	23549522	Cover			
*c△B362	23549523	Cover			
*c△B365	23549524	Cover			
*c B367	23549525	Cover			
*c△B370	23549520	Cover			
*c△B372	23549521	Cover			
*c△B375	23549518	Cover			
*c△B377	23549519	Cover			
*c△B380	23549517	Cover			
*c B382	23549515	Focus Ring Cover			
*c△B384	23890821	Base			
*c△B386	23549516	Top Cover			
*c B400	23890837	Base			
*c B410	23549575	Cover			
*c△B420	23549576	Cover			
*c△B430	23549577	Cover			
*c B470	23421989	Plate			
*b△E200	23430655	Optical Engine CJ325TA			
*a△E200	23430673	Optical Engine CJ326TA			

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
- ELECTRICAL PARTS -			
■	U001	23783702	P C Board Assy Main(TLP650, TLP651)
■	U001	23783974	P C Board Assy Main(TLP450, TLP451)
- INTEGRATED CIRCUITS -			
	Q401	23000101	IC ET6050S0B
*b	Q402	23000101	IC ET6050S0B
	Q407	23000102	IC ET1021F0A
	Q501	23000101	IC ET6050S0B
*b	Q502	23000101	IC ET6050S0B
	Q507	23000102	IC ET1021F0A
	Q601	23000101	IC ET6050S0B
*b	Q602	23000101	IC ET6050S0B
	Q607	23000102	IC ET1021F0A
	Q701	23906361	IC CXA2111R
	Q900	23906224	IC M62399FP
	Q903	23000964	IC ET2081F0A
	Q904	20510122	IC TC74ACT04FT
	Q905	23906661	IC M62393FP
	Q906	B0370180	IC TA78L12F
	Q950	70129738	IC PQ20VZ1U
	Q951	70129738	IC PQ20VZ1U
	Q954	70129738	IC PQ20VZ1U
	Q955	A6030630	IC TC7S08F
	Q971	23000100	IC CXD3503R
	QD001	23900974	IC ADXL202JQC
	QD005	23906605	IC SN74LVC74APW
	QD004	23000069	IC SN74LVC14APW
	QD006	23906604	IC SN74LVC04APW
	QD008	A6030640	IC TC7S32F
	QD009	70129738	IC PQ20VZ1U
	QD010	70129738	IC PQ20VZ1U
	QD011	70129738	IC PQ20VZ1U
	QD012	70129738	IC PQ20VZ1U
	QD013	70129738	IC PQ20VZ1U
	QD014	70129738	IC PQ20VZ1U
	QD015	A6030620	IC TC7S04F
	QD016	23000955	IC 74LVC125APWR
	QD100	23906983	IC CXD2303AQ
	QD200	23000959	IC SAA7114
	QD300	23000068	IC AD9884KS-140
	QD401	23000107	IC MB90098-101
	QD402	23906942	IC ICS1523M
	QD403	23906604	IC SN74LVC04APW
	QD404	23000120	IC SYG5X
	QD405	23906667	IC EPF6024AQ208-2
	QD406	23906473	IC M51V8221A-30
	QD407	23905013	IC TLC2932
	QD500	23906982	IC IP00C711
	QD501	23000112	IC 161610DTC-10
	QD502	23000112	IC 161610DTC-10
	QD503	23000112	IC 161610DTC-10
	QD600	23906984	IC MB40C950VPFV
	QF001	23000976	IC TC642VOA
	QF003	23000976	IC TC642VOA
	QF201	70129738	IC PQ20VZ1U
	QF202	70129738	IC PQ20VZ1U
	QF203	70129738	IC PQ20VZ1U
	QL001	23906234	IC M62320FP
	QL004	23906234	IC M62320FP
	QL005	23000104	IC HD64F7045F28
	QL006	70200430	IC RN5VD27A
	QL007	23000072	IC SN74LV123APW
	QL008	23906850	IC SN74LV14APWR
	QL010	70200250	IC 74VHC541MTCX
	QL011	23906999	IC CAT24WC16J
	QL012	23000073	IC SN74LV125APW
	QL013	23000073	IC SN74LV125APW
	QL014	23906611	IC SN74LV74APWR
	QL015	70200127	IC UPD4721GS
	QL016	70200127	IC UPD4721GS
	QL017	23906850	IC SN74LV14APWR
	QL018	B0483329	IC TC55257DFTL-85L

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
QL020	23900971	IC	LM75CIMX-5
QL021	23900971	IC	LM75CIMX-5
ZL001	23906782	IC	TSOP1838
ZL002	23906782	IC	TSOP1838
- TRANSISTORS -			
Q403	A6365620	Transistor, Chip	2SC4116-Y
Q404	A6549570	Transistor, Chip	2SA1586-Y
Q405	A6358620	Transistor, Chip	2SC3265-Y
Q406	A6546370	Transistor, Chip	2SA1298-Y
Q503	A6365620	Transistor, Chip	2SC4116-Y
Q504	A6549570	Transistor, Chip	2SA1586-Y
Q505	A6358620	Transistor, Chip	2SC3265-Y
Q506	A6546370	Transistor, Chip	2SA1298-Y
Q603	A6365620	Transistor, Chip	2SC4116-Y
Q604	A6549570	Transistor, Chip	2SA1586-Y
Q605	A6358620	Transistor, Chip	2SC3265-Y
Q606	A6546370	Transistor, Chip	2SA1298-Y
QF002	A6341974	Transistor, Chip	2SC2873-Y
QF004	A6341974	Transistor, Chip	2SC2873-Y
QL002	A6365620	Transistor, Chip	2SC4116-Y
QL003	A6365620	Transistor, Chip	2SC4116-Y
- DIODES -			
D701	A7152750	Diode, Chip	1SS226
D702	A7152750	Diode, Chip	1SS226
D703	A7152750	Diode, Chip	1SS226
DD601	A7152750	Diode, Chip	1SS226
DD602	A7152750	Diode, Chip	1SS226
DD603	A7152750	Diode, Chip	1SS226
DL001	A7150800	Diode, Chip	1SS187
DL002	23357168	Diode, Zener	UDZSTE176. 2B
DL003	23357168	Diode, Zener	UDZSTE176. 2B
DL004	23357168	Diode, Zener	UDZSTE176. 2B
DL005	23357168	Diode, Zener	UDZSTE176. 2B
DL006	23357168	Diode, Zener	UDZSTE176. 2B
DL007	23357168	Diode, Zener	UDZSTE176. 2B
DL008	23357168	Diode, Zener	UDZSTE176. 2B
DL009	23357168	Diode, Zener	UDZSTE176. 2B
DL010	23357168	Diode, Zener	UDZSTE176. 2B
DL011	23357168	Diode, Zener	UDZSTE176. 2B
DL012	23357168	Diode, Zener	UDZSTE176. 2B
DL013	23357168	Diode, Zener	UDZSTE176. 2B
DL014	23357168	Diode, Zener	UDZSTE176. 2B
DL015	23357168	Diode, Zener	UDZSTE176. 2B
DL016	23358539	Diode, LED	SML-020MLTT6
DL017	23358539	Diode, LED	SML-020MLTT6
DL018	23358539	Diode, LED	SML-020MLTT6
DL019	A7150800	Diode, Chip	1SS187
DL020	A7150800	Diode, Chip	1SS187
DL021	A7150800	Diode, Chip	1SS187
DL023	A7150800	Diode, Chip	1SS187
DL024	23358539	Diode, LED	SML-020MLTT6
DL025	23357169	Diode, Zener	UDZSTE176. 8B
DL027	A7150800	Diode, Chip	1SS187
DL028	A7150800	Diode, Chip	1SS187
DL030	23357167	Diode, Zener	UDZS5. 1B
DL031	A7150800	Diode, Chip	1SS187
DL032	23357168	Diode, Zener	UDZSTE176. 2B
DL033	23357168	Diode, Zener	UDZSTE176. 2B
DL034	A7150800	Diode, Chip	1SS187
DL035	A7150800	Diode, Chip	1SS187
DL036	A7150800	Diode, Chip	1SS187
DL037	23357168	Diode, Zener	UDZSTE176. 2B
DL038	23357168	Diode, Zener	UDZSTE176. 2B
DL039	23357172	Diode, Zener	UDZSTE1710B
- COILS -			
L401	23245847	Coil, Chip	TRF4330CC
L402	23245847	Coil, Chip	TRF4330CC
*b	L403	23245847	Coil, Chip
	L404	23245847	Coil, Chip
	L405	23245847	Coil, Chip
*b	L406	23245847	Coil, Chip
	L407	23245847	Coil, Chip
	L501	23245847	Coil, Chip
	L502	23245847	Coil, Chip
*b	L503	23245847	Coil, Chip

(Note)

\*a: TLP450, TLP451

\*b: TLP650, TLP651

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION			
*b	L504	23245847	Coil, Chip	TRF4330CC	C427	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L505	23245847	Coil, Chip	TRF4330CC	C428	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L506	23245847	Coil, Chip	TRF4330CC	C429	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L507	23245847	Coil, Chip	TRF4330CC	C430	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L601	23245847	Coil, Chip	TRF4330CC	C431	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
*b	L602	23245847	Coil, Chip	TRF4330CC	C432	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L603	23245847	Coil, Chip	TRF4330CC	C433	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L604	23245847	Coil, Chip	TRF4330CC	C434	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
*b	L605	23245847	Coil, Chip	TRF4330CC	C435	24088079	Cap, Chip	10 $\mu$ F	M 10V	
	L606	23245847	Coil, Chip	TRF4330CC	C436	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	L607	23245847	Coil, Chip	TRF4330CC	C437	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L701	23245847	Coil, Chip	TRF4330CC	C438	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L901	23245847	Coil, Chip	TRF4330CC	C439	24436330	Cap, Ceramic	33pF	J 50V	
	L903	23245847	Coil, Chip	TRF4330CC	C505	24092538	Cap, Chip	1 $\mu$ F	Z 10V	
	L950	23245847	Coil, Chip	TRF4330CC	C506	24088085	Cap, Chip	22 $\mu$ F	M 10V	
	L971	23245847	Coil, Chip	TRF4330CC	C507	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	
	L972	23245847	Coil, Chip	TRF4330CC	C508	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	L973	23245863	Coil	TRF4331CC	C509	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	L974	23245863	Coil	TRF4331CC	C510	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	L975	23245863	Coil	TRF4331CC	C511	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	L976	23245861	Coil, Chip	TRF4151CC	C512	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	L977	23245861	Coil, Chip	TRF4151CC	*b C513	24088085	Cap, Chip	22 $\mu$ F	M 10V	
	L978	23245861	Coil, Chip	TRF4151CC	*b C514	24092538	Cap, Chip	1 $\mu$ F	Z 10V	
	LD001	23103793	Coil, Chip	MMZ2012S121A	*b C515	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD002	23103793	Coil, Chip	MMZ2012S121A	*b C516	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	LD003	23103793	Coil, Chip	MMZ2012S121A	*b C517	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD004	23103793	Coil, Chip	MMZ2012S121A	*b C518	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	LD005	23103793	Coil, Chip	MMZ2012S121A	C519	24088093	Cap, Chip	15 $\mu$ F	M 16V	
	LD006	23103793	Coil, Chip	MMZ2012S121A	C520	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	LD007	23245851	Coil, Chip	TRF4220CC	C521	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD008	23245851	Coil, Chip	TRF4220CC	C523	24088096	Cap, Chip	4.7 $\mu$ F	M 25V	
	LD011	23245851	Coil, Chip	TRF4220CC	C524	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD012	23103880	Coil, Choke	TEM2011Y	C525	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD013	23245849	Coil, Chip	TRF4101CC	C526	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD100	23103793	Coil, Chip	MMZ2012S121A	C527	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD101	23103793	Coil, Chip	MMZ2012S121A	C528	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD102	23103793	Coil, Chip	MMZ2012S121A	C529	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD200	23103793	Coil, Chip	MMZ2012S121A	C530	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD201	23103793	Coil, Chip	MMZ2012S121A	C531	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD202	23103793	Coil, Chip	MMZ2012S121A	C532	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD300	23103793	Coil, Chip	MMZ2012S121A	C533	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD301	23103793	Coil, Chip	MMZ2012S121A	C534	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD302	23103793	Coil, Chip	MMZ2012S121A	C535	24088079	Cap, Chip	10 $\mu$ F	M 10V	
	LD303	23103793	Coil, Chip	MMZ2012S121A	C536	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD400	23103793	Coil, Chip	MMZ2012S121A	C537	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD401	23103793	Coil, Chip	MMZ2012S121A	C538	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
	LD402	23103793	Coil, Chip	MMZ2012S121A	C539	24436330	Cap, Ceramic	33pF	J 50V	
	LD403	23103793	Coil, Chip	MMZ2012S121A	C605	24092538	Cap, Chip	1 $\mu$ F	Z 10V	
	LD500	23103793	Coil, Chip	MMZ2012S121A	C606	24088085	Cap, Chip	22 $\mu$ F	M 10V	
	LD600	23103793	Coil, Chip	MMZ2012S121A	C607	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	
	LD601	23103793	Coil, Chip	MMZ2012S121A	C608	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	LD602	23103793	Coil, Chip	MMZ2012S121A	C609	24295106	Cap, Chip	10 $\mu$ F	M 25V	
	LF201	23245847	Coil, Chip	TRF4330CC	C610	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	
- CAPACITORS -					C611	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	
	C405	24092538	Cap, Chip	1 $\mu$ F	Z 10V	C612	24295106	Cap, Chip	10 $\mu$ F	M 25V
	C406	24088085	Cap, Chip	22 $\mu$ F	M 10V	*b C613	24088085	Cap, Chip	22 $\mu$ F	M 10V
	C407	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	*b C614	24092538	Cap, Chip	1 $\mu$ F	Z 10V
	C408	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	*b C615	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V
	C409	24295106	Cap, Chip	10 $\mu$ F	M 25V	*b C616	24295106	Cap, Chip	10 $\mu$ F	M 25V
	C410	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	*b C617	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V
	C411	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	*b C618	24295106	Cap, Chip	10 $\mu$ F	M 25V
	C412	24295106	Cap, Chip	10 $\mu$ F	M 25V	C619	24088093	Cap, Chip	15 $\mu$ F	M 16V
*b	C413	24088085	Cap, Chip	22 $\mu$ F	M 10V	C620	24295106	Cap, Chip	10 $\mu$ F	M 25V
*b	C414	24092538	Cap, Chip	1 $\mu$ F	Z 10V	C621	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V
*b	C415	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	C623	24088096	Cap, Chip	4.7 $\mu$ F	M 25V
*b	C416	24295106	Cap, Chip	10 $\mu$ F	M 25V	C624	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V
*b	C417	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	C625	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
*b	C418	24295106	Cap, Chip	10 $\mu$ F	M 25V	C626	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C419	24088093	Cap, Chip	15 $\mu$ F	M 16V	C627	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C420	24295106	Cap, Chip	10 $\mu$ F	M 25V	C628	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C421	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	C629	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C423	24088096	Cap, Chip	4.7 $\mu$ F	M 25V	C630	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C424	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V	C631	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C425	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	C632	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
	C426	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	C633	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V

(Note)

\*a: TLP450, TLP451

\*b: TLP650, TLP651

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
C634	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C635	24088079	Cap, Chip	10 $\mu$ F	M 10V
C636	24092294	Cap, Chip	0.33 $\mu$ F	Z 16V
C637	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C638	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C639	24436330	Cap, Ceramic	33pF	J 50V
C701	24092441	Cap, Chip	1 $\mu$ F	Z 16V
C702	24092441	Cap, Chip	1 $\mu$ F	Z 16V
C703	24092441	Cap, Chip	1 $\mu$ F	Z 16V
C704	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C705	24088079	Cap, Chip	10 $\mu$ F	M 10V
C706	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C707	24088079	Cap, Chip	10 $\mu$ F	M 10V
C709	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C710	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C711	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C712	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C713	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C714	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C715	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C900	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C901	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C902	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C903	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C904	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C905	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C906	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C907	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C908	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C909	24088079	Cap, Chip	10 $\mu$ F	M 10V
C911	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C912	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C913	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C914	24088079	Cap, Chip	10 $\mu$ F	M 10V
C915	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C916	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C917	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C918	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C919	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C920	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C921	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C922	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C923	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C924	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C929	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C950	24295106	Cap, Chip	10 $\mu$ F	M 25V
C951	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C952	24619099	Cap, Chip	33 $\mu$ F	M 10V
C953	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C954	24619106	Cap, Chip	33 $\mu$ F	M 25V
C955	24092293	Cap, Chip	0.1 $\mu$ F	Z 25V
C956	24619106	Cap, Chip	33 $\mu$ F	M 25V
C957	24092441	Cap, Chip	1 $\mu$ F	Z 16V
C966	24295106	Cap, Chip	10 $\mu$ F	M 25V
C967	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C968	24619096	Cap, Chip	22 $\mu$ F	M 6.3V
C969	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C970	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C971	24088079	Cap, Chip	10 $\mu$ F	M 10V
C972	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C973	24088079	Cap, Chip	10 $\mu$ F	M 10V
C974	24092538	Cap, Chip	1 $\mu$ F	Z 10V
C977	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C978	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V
C979	24109331	Cap, Chip	330pF	K 50V
C980	24109681	Cap, Chip	680pF	K 50V
C981	24109331	Cap, Chip	330pF	K 50V
C982	24109681	Cap, Chip	680pF	K 50V
C983	24109331	Cap, Chip	330pF	K 50V
C984	24109681	Cap, Chip	680pF	K 50V
C985	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD001	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD002	24092573	Cap, Chip	0.47 $\mu$ F	K 16V
CD003	24092573	Cap, Chip	0.47 $\mu$ F	K 16V
CD004	24109103	Cap, Chip	0.01 $\mu$ F	K 25V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CD005	24109103	Cap, Chip	0.01 $\mu$ F	K 25V
CD007	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD008	24105101	Cap, Chip	100pF	J 50V
CD009	24105101	Cap, Chip	100pF	J 50V
CD010	24105101	Cap, Chip	100pF	J 50V
CD011	24105101	Cap, Chip	100pF	J 50V
CD012	24105101	Cap, Chip	100pF	J 50V
CD013	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD014	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD015	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD016	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD017	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD018	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD019	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD020	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD021	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD022	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD023	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD024	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD025	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD026	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD027	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD028	24088080	Cap, Chip	33 $\mu$ F	M 10V
CD029	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD030	24088080	Cap, Chip	33 $\mu$ F	M 10V
CD031	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD032	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD033	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD034	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD035	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD036	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD037	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD038	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD039	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD042	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD043	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD044	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD045	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD046	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD047	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD050	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD052	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD100	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD101	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD102	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD103	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD104	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD105	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD106	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD107	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD108	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD109	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD110	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD111	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD112	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD113	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD114	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD115	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD116	24088951	Cap, Chip	6.8 $\mu$ F	M 16V
CD117	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD118	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD119	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD120	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD200	24088079	Cap, Chip	10 $\mu$ F	M 10V
CD201	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD202	24105090	Cap, Chip	9pF	J 50V
CD203	24105090	Cap, Chip	9pF	J 50V
CD205	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD206	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD207	24109473	Cap, Chip	0.047 $\mu$ F	K 25V
CD208	24109473	Cap, Chip	0.047 $\mu$ F	K 25V
CD209	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD210	24109473	Cap, Chip	0.047 $\mu$ F	K 25V
CD211	24092538	Cap, Chip	1 $\mu$ F	Z 10V
CD212	24092538	Cap, Chip	1 $\mu$ F	Z 10V



LOCATION NUMBER	PART NUMBER	DESCRIPTION	LOCATION NUMBER	PART NUMBER	DESCRIPTION
CD213	24092538	Cap, Chip	CD431	24092538	Cap, Chip
CD214	24092538	Cap, Chip	CD432	24092538	Cap, Chip
CD216	24088079	Cap, Chip	CD433	24092538	Cap, Chip
CD217	24092538	Cap, Chip	CD434	24092538	Cap, Chip
CD218	24092538	Cap, Chip	CD500	24092538	Cap, Chip
CD219	24092538	Cap, Chip	CD501	24092538	Cap, Chip
CD220	24092538	Cap, Chip	CD502	24092538	Cap, Chip
CD221	24092538	Cap, Chip	CD503	24092538	Cap, Chip
CD222	24092538	Cap, Chip	CD504	24092538	Cap, Chip
CD223	24092538	Cap, Chip	CD505	24092538	Cap, Chip
CD224	24092538	Cap, Chip	CD506	24092538	Cap, Chip
CD225	24109473	Cap, Chip	CD507	24092538	Cap, Chip
CD300	24088080	Cap, Chip	CD508	24092538	Cap, Chip
CD301	24092538	Cap, Chip	CD509	24092538	Cap, Chip
CD302	24092538	Cap, Chip	CD510	24092538	Cap, Chip
CD303	24092538	Cap, Chip	CD511	24092538	Cap, Chip
CD304	24092538	Cap, Chip	CD512	24092538	Cap, Chip
CD305	24092538	Cap, Chip	CD513	24092538	Cap, Chip
CD306	24092538	Cap, Chip	CD514	24092538	Cap, Chip
CD307	24088079	Cap, Chip	CD515	24092538	Cap, Chip
CD308	24092538	Cap, Chip	CD516	24092538	Cap, Chip
CD309	24109473	Cap, Chip	CD517	24092538	Cap, Chip
CD310	24092538	Cap, Chip	CD518	24092538	Cap, Chip
CD311	24092538	Cap, Chip	CD519	24092538	Cap, Chip
CD312	24092538	Cap, Chip	CD520	24092538	Cap, Chip
CD313	24109473	Cap, Chip	CD521	24092538	Cap, Chip
CD314	24092538	Cap, Chip	CD522	24092538	Cap, Chip
CD315	24092538	Cap, Chip	CD523	24092538	Cap, Chip
CD316	24092538	Cap, Chip	CD524	24092538	Cap, Chip
CD317	24109473	Cap, Chip	CD525	24092538	Cap, Chip
CD318	24092538	Cap, Chip	CD526	24092538	Cap, Chip
CD319	24092538	Cap, Chip	CD527	24092538	Cap, Chip
CD320	24092538	Cap, Chip	CD528	24092538	Cap, Chip
CD321	24092538	Cap, Chip	CD529	24092538	Cap, Chip
CD322	24088080	Cap, Chip	CD530	24092538	Cap, Chip
CD323	24092538	Cap, Chip	CD531	24092538	Cap, Chip
CD324	24109103	Cap, Chip	CD532	24092538	Cap, Chip
CD325	24092543	Cap, Chip	CD533	24092538	Cap, Chip
CD326	24092538	Cap, Chip	CD534	24092538	Cap, Chip
CD327	24092538	Cap, Chip	CD535	24092538	Cap, Chip
CD328	24092538	Cap, Chip	CD536	24092538	Cap, Chip
CD329	24092538	Cap, Chip	CD537	24092538	Cap, Chip
CD330	24092538	Cap, Chip	CD538	24092538	Cap, Chip
CD331	24092538	Cap, Chip	CD539	24092538	Cap, Chip
CD332	24092538	Cap, Chip	CD540	24092538	Cap, Chip
CD333	24088080	Cap, Chip	CD541	24092538	Cap, Chip
CD334	24088080	Cap, Chip	CD542	24092538	Cap, Chip
CD401	24092538	Cap, Chip	CD543	24092538	Cap, Chip
CD403	24100104	Cap, Chip	CD544	24092538	Cap, Chip
CD404	24109332	Cap, Chip	CD545	24092538	Cap, Chip
CD405	24105151	Cap, Chip	CD546	24092538	Cap, Chip
CD406	24092538	Cap, Chip	CD547	24092538	Cap, Chip
CD407	24100104	Cap, Chip	CD548	24092538	Cap, Chip
CD408	24092538	Cap, Chip	CD549	24092538	Cap, Chip
CD409	24092538	Cap, Chip	CD600	24100104	Cap, Chip
CD410	24092538	Cap, Chip	CD601	24088951	Cap, Chip
CD411	24092538	Cap, Chip	CD602	24088951	Cap, Chip
CD412	24092538	Cap, Chip	CD603	24092538	Cap, Chip
CD413	24092730	Cap, Chip	CD604	24092538	Cap, Chip
CD415	24092538	Cap, Chip	CD607	24092538	Cap, Chip
CD416	24092538	Cap, Chip	CD608	24100104	Cap, Chip
CD417	24092538	Cap, Chip	CD609	24092538	Cap, Chip
CD418	24092538	Cap, Chip	CD610	24100104	Cap, Chip
CD419	24092538	Cap, Chip	CD611	24100104	Cap, Chip
CD420	24092538	Cap, Chip	CF001	24109103	Cap, Chip
CD421	24092538	Cap, Chip	CF002	24092291	Cap, Chip
CD422	24092538	Cap, Chip	CF003	24092178	Cap, Chip
CD423	24092538	Cap, Chip	CF004	24092291	Cap, Chip
CD424	24092538	Cap, Chip	CF005	24109103	Cap, Chip
CD425	24092538	Cap, Chip	CF006	24092291	Cap, Chip
CD426	24092538	Cap, Chip	CF007	24092178	Cap, Chip
CD427	24092538	Cap, Chip	CF008	24092291	Cap, Chip
CD428	24092538	Cap, Chip	CF009	24092291	Cap, Chip
CD429	24092538	Cap, Chip	CF010	24092291	Cap, Chip
CD430	24092538	Cap, Chip	CF201	24088088	Cap, Tantalum

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CF202	24109103	Cap, Chip	0.01 $\mu$ F	K 25V			- RESISTORS -		
CF203	24088088	Cap, Tantalum	47 $\mu$ F	M 20V	R409	24011101	Res, Chip	100 $\Omega$	J 1/20W
CF204	24109103	Cap, Chip	0.01 $\mu$ F	K 25V	R410	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CF205	24296685	Cap, Tantalum, Chip	6.8 $\mu$ F	M 35V	R411	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CF206	24109103	Cap, Chip	0.01 $\mu$ F	K 25V	R412	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CF207	24296685	Cap, Tantalum, Chip	6.8 $\mu$ F	M 35V	R413	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CF208	24109103	Cap, Chip	0.01 $\mu$ F	K 25V	R415	24011101	Res, Chip	100 $\Omega$	J 1/20W
CF209	24296685	Cap, Tantalum, Chip	6.8 $\mu$ F	M 35V	R416	24011681	Res, Chip	680 $\Omega$	J 1/20W
CF210	24109103	Cap, Chip	0.01 $\mu$ F	K 25V	R417	24011101	Res, Chip	100 $\Omega$	J 1/20W
CF211	24296685	Cap, Tantalum, Chip	6.8 $\mu$ F	M 35V	R418	24011681	Res, Chip	680 $\Omega$	J 1/20W
CF212	24109103	Cap, Chip	0.01 $\mu$ F	K 25V	R421	24000445	Res, Chip Jumper	0 $\Omega$	
CL001	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R423	24000445	Res, Chip Jumper	0 $\Omega$	
CL002	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R424	24011100	Res, Chip	10 $\Omega$	J 1/20W
CL003	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R425	24011100	Res, Chip	10 $\Omega$	J 1/20W
CL004	24088088	Cap, Tantalum	47 $\mu$ F	M 20V	R431	24000445	Res, Chip Jumper	0 $\Omega$	
CL005	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R509	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL006	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R510	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL008	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R511	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL009	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R512	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CL010	24105200	Cap, Chip	20pF	J 50V	R513	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CL011	24105200	Cap, Chip	20pF	J 50V	R521	24000445	Res, Chip Jumper	0 $\Omega$	
CL012	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R523	24000445	Res, Chip Jumper	0 $\Omega$	
CL013	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R609	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL014	24105471	Cap, Chip	470pF	J 50V	R610	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL015	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R611	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL016	24619103	Cap, Chip	4.7 $\mu$ F	M 25V	R612	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CL017	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R613	24011339	Res, Chip	3.3 $\Omega$	J 1/20W
CL018	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R621	24000445	Res, Chip Jumper	0 $\Omega$	
CL019	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R623	24000445	Res, Chip Jumper	0 $\Omega$	
CL020	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R624	24000445	Res, Chip Jumper	0 $\Omega$	
CL021	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R705	24011103	Res, Chip	10k $\Omega$	J 1/20W
CL022	24105221	Cap, Chip	220pF	J 50V	R706	24011103	Res, Chip	10k $\Omega$	J 1/20W
CL023	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R709	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL024	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R710	24011152	Res, Chip	1.5k $\Omega$	J 1/20W
CL025	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R711	24011152	Res, Chip	1.5k $\Omega$	J 1/20W
CL026	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R712	24011332	Res, Chip	3.3k $\Omega$	J 1/20W
CL027	24105101	Cap, Chip	100pF	J 50V	R900	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL028	24105101	Cap, Chip	100pF	J 50V	R901	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL029	24105101	Cap, Chip	100pF	J 50V	R902	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL030	24105101	Cap, Chip	100pF	J 50V	R903	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL031	24105101	Cap, Chip	100pF	J 50V	R904	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL032	24105101	Cap, Chip	100pF	J 50V	R905	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL033	24105101	Cap, Chip	100pF	J 50V	R906	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL034	24105101	Cap, Chip	100pF	J 50V	R907	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL035	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R908	24011103	Res, Chip	10k $\Omega$	J 1/20W
CL036	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R909	24011472	Res, Chip	4.7k $\Omega$	J 1/20W
CL037	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R911	24011472	Res, Chip	4.7k $\Omega$	J 1/20W
CL038	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R912	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL039	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R913	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL040	24109152	Cap, Chip	1500pF	K 50V	R914	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL041	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R915	24011103	Res, Chip	10k $\Omega$	J 1/20W
CL042	24100103	Cap, Chip	0.01 $\mu$ F	Z 50V	R916	24011103	Res, Chip	10k $\Omega$	J 1/20W
CL043	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R917	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL044	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R918	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL045	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R919	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL046	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R920	24011101	Res, Chip	100 $\Omega$	J 1/20W
CL047	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R925	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL049	24619102	Cap, Chip	47 $\mu$ F	M 16V	R926	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL050	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R927	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL051	24109152	Cap, Chip	1500pF	K 50V	R928	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL052	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R929	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL053	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R930	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL054	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R931	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL055	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R932	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL056	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R933	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL057	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R934	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL058	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R935	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL059	24092441	Cap, Chip	1 $\mu$ F	Z 16V	R936	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL060	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R937	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL062	24619102	Cap, Chip	47 $\mu$ F	M 16V	R938	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL063	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R939	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL064	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R940	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL065	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R941	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL066	24100104	Cap, Chip	0.1 $\mu$ F	Z 25V	R942	24011330	Res, Chip	33 $\Omega$	J 1/20W
CL067	24092538	Cap, Chip	1 $\mu$ F	Z 10V	R943	24011330	Res, Chip	33 $\Omega$	J 1/20W

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R950	24011302	Res, Chip	3kΩ	J 1/20W	RD306	24011750	Res, Chip	75Ω	J 1/20W
R951	24011102	Res, Chip	1kΩ	J 1/20W	RD307	24011102	Res, Chip	1kΩ	J 1/20W
R952	24011103	Res, Chip	10kΩ	J 1/20W	RD308	24011102	Res, Chip	1kΩ	J 1/20W
R953	24011152	Res, Chip	1.5kΩ	J 1/20W	RD309	24000571	Res, Chip	1.5kΩ	F 1/16W
R954	24011102	Res, Chip	1kΩ	J 1/20W	RD310	24019346	Res, Block	100Ωx4	J 1/16W
R961	24011152	Res, Chip	1.5kΩ	J 1/20W	RD311	24019346	Res, Block	100Ωx4	J 1/16W
R962	24011151	Res, Chip	150Ω	J 1/20W	RD312	24019346	Res, Block	100Ωx4	J 1/16W
R963	24011102	Res, Chip	1kΩ	J 1/20W	RD313	24019346	Res, Block	100Ωx4	J 1/16W
R964	24011104	Res, Chip	100kΩ	J 1/20W	RD314	24019346	Res, Block	100Ωx4	J 1/16W
*b R965	24000445	Res, Chip Jumper	0Ω		RD315	24019346	Res, Block	100Ωx4	J 1/16W
*a R966	24000445	Res, Chip Jumper	0Ω		RD316	24019346	Res, Block	100Ωx4	J 1/16W
*b R967	24000445	Res, Chip Jumper	0Ω		RD317	24019346	Res, Block	100Ωx4	J 1/16W
*a R968	24000445	Res, Chip Jumper	0Ω		RD318	24019346	Res, Block	100Ωx4	J 1/16W
*a R969	24000445	Res, Chip Jumper	0Ω		RD319	24019346	Res, Block	100Ωx4	J 1/16W
*b R970	24000445	Res, Chip Jumper	0Ω		RD320	24011105	Res, Chip	1MΩ	J 1/20W
R971	24011102	Res, Chip	1kΩ	J 1/20W	RD400	24011101	Res, Chip	100Ω	J 1/20W
R972	24011103	Res, Chip	10kΩ	J 1/20W	RD401	24011101	Res, Chip	100Ω	J 1/20W
R973	24011102	Res, Chip	1kΩ	J 1/20W	RD402	24011101	Res, Chip	100Ω	J 1/20W
R974	24011103	Res, Chip	10kΩ	J 1/20W	RD403	24011101	Res, Chip	100Ω	J 1/20W
R975	24011102	Res, Chip	1kΩ	J 1/20W	RD404	24011101	Res, Chip	100Ω	J 1/20W
R976	24011103	Res, Chip	10kΩ	J 1/20W	RD405	24011101	Res, Chip	100Ω	J 1/20W
R977	24011103	Res, Chip	10kΩ	J 1/20W	RD406	24011103	Res, Chip	10kΩ	J 1/20W
RD001	24011125	Res, Chip	1.2MΩ	J 1/20W	RD407	24011103	Res, Chip	10kΩ	J 1/20W
RD004	24011101	Res, Chip	100Ω	J 1/20W	RD408	24011103	Res, Chip	10kΩ	J 1/20W
RD005	24011101	Res, Chip	100Ω	J 1/20W	RD409	24011682	Res, Chip	6.8kΩ	J 1/20W
RD006	24011101	Res, Chip	100Ω	J 1/20W	RD410	24011222	Res, Chip	2.2kΩ	J 1/20W
RD007	24011101	Res, Chip	100Ω	J 1/20W	*a RD411	24011100	Res, Chip	10Ω	J 1/20W
RD008	24011101	Res, Chip	100Ω	J 1/20W	*a RD412	24011100	Res, Chip	10Ω	J 1/20W
RD009	24011470	Res, Chip	47Ω	J 1/20W	RD413	24011470	Res, Chip	47Ω	J 1/20W
RD010	24011470	Res, Chip	47Ω	J 1/20W	RD414	24011470	Res, Chip	47Ω	J 1/20W
RD011	24011470	Res, Chip	47Ω	J 1/20W	RD415	24011470	Res, Chip	47Ω	J 1/20W
RD012	24011470	Res, Chip	47Ω	J 1/20W	RD416	24011470	Res, Chip	47Ω	J 1/20W
RD013	24011470	Res, Chip	47Ω	J 1/20W	RD417	24011102	Res, Chip	1kΩ	J 1/20W
RD014	24000571	Res, Chip	1.5kΩ	F 1/16W	RD418	24011102	Res, Chip	1kΩ	J 1/20W
RD015	24000560	Res, Chip	910Ω	F 1/16W	RD419	24011470	Res, Chip	47Ω	J 1/20W
RD016	24000571	Res, Chip	1.5kΩ	F 1/16W	RD420	24011331	Res, Chip	330Ω	J 1/20W
RD017	24000560	Res, Chip	910Ω	F 1/16W	RD421	24011102	Res, Chip	1kΩ	J 1/20W
RD018	24000571	Res, Chip	1.5kΩ	F 1/16W	RD422	24011392	Res, Chip	3.9kΩ	J 1/20W
RD019	24000573	Res, Chip	1kΩ	F 1/16W	RD423	24011105	Res, Chip	1MΩ	J 1/20W
RD020	24000590	Res, Chip	3kΩ	F 1/16W	RD424	24011470	Res, Chip	47Ω	J 1/20W
RD021	24000573	Res, Chip	1kΩ	F 1/16W	RD425	24011470	Res, Chip	47Ω	J 1/20W
RD022	24000590	Res, Chip	3kΩ	F 1/16W	RD426	24011470	Res, Chip	47Ω	J 1/20W
RD023	24000573	Res, Chip	1kΩ	F 1/16W	RD431	24011101	Res, Chip	100Ω	J 1/20W
RD024	24000590	Res, Chip	3kΩ	F 1/16W	RD432	24011101	Res, Chip	100Ω	J 1/20W
RD025	24000573	Res, Chip	1kΩ	F 1/16W	*b RD433	24872100	Res, Chip	10Ω	J 1/16W
RD026	24011102	Res, Chip	1kΩ	J 1/20W	*b RD434	24872100	Res, Chip	10Ω	J 1/16W
RD027	24011102	Res, Chip	1kΩ	J 1/20W	RD435	24011470	Res, Chip	47Ω	J 1/20W
RD028	24011103	Res, Chip	10kΩ	J 1/20W	RD437	24011102	Res, Chip	1kΩ	J 1/20W
RD029	24011103	Res, Chip	10kΩ	J 1/20W	RD439	24011102	Res, Chip	1kΩ	J 1/20W
RD030	24011101	Res, Chip	100Ω	J 1/20W	RD440	24011102	Res, Chip	1kΩ	J 1/20W
RD031	24011103	Res, Chip	10kΩ	J 1/20W	RD441	24011102	Res, Chip	1kΩ	J 1/20W
RD102	24011330	Res, Chip	33Ω	J 1/20W	RD442	24011102	Res, Chip	1kΩ	J 1/20W
RD103	24011330	Res, Chip	33Ω	J 1/20W	RD443	24011102	Res, Chip	1kΩ	J 1/20W
RD105	24011102	Res, Chip	1kΩ	J 1/20W	RD444	24011470	Res, Chip	47Ω	J 1/20W
RD111	24011102	Res, Chip	1kΩ	J 1/20W	RD500	24011103	Res, Chip	10kΩ	J 1/20W
RD113	24011330	Res, Chip	33Ω	J 1/20W	RD501	24011103	Res, Chip	10kΩ	J 1/20W
RD114	24019346	Res, Block	100Ωx4	J 1/16W	RD502	24011102	Res, Chip	1kΩ	J 1/20W
RD115	24019346	Res, Block	100Ωx4	J 1/16W	RD503	24011101	Res, Chip	100Ω	J 1/20W
RD116	24019346	Res, Block	100Ωx4	J 1/16W	RD600	24019346	Res, Block	100Ωx4	J 1/16W
RD117	24019346	Res, Block	100Ωx4	J 1/16W	RD601	24019346	Res, Block	100Ωx4	J 1/16W
RD200	24011560	Res, Chip	56Ω	J 1/20W	RD602	24019346	Res, Block	100Ωx4	J 1/16W
RD201	24011560	Res, Chip	56Ω	J 1/20W	RD603	24019346	Res, Block	100Ωx4	J 1/16W
RD202	24011560	Res, Chip	56Ω	J 1/20W	RD604	24019346	Res, Block	100Ωx4	J 1/16W
RD203	24019346	Res, Block	100Ωx4	J 1/16W	RD605	24019346	Res, Block	100Ωx4	J 1/16W
RD204	24019346	Res, Block	100Ωx4	J 1/16W	RD606	24019346	Res, Block	100Ωx4	J 1/16W
RD208	24011470	Res, Chip	47Ω	J 1/20W	RD607	24011101	Res, Chip	100Ω	J 1/20W
RD213	24011180	Res, Chip	18Ω	J 1/20W	RD608	24011101	Res, Chip	100Ω	J 1/20W
RD214	24011180	Res, Chip	18Ω	J 1/20W	RD609	24011242	Res, Chip	2.4kΩ	J 1/20W
RD215	24011180	Res, Chip	18Ω	J 1/20W	RD610	24011101	Res, Chip	100Ω	J 1/20W
RD216	24011472	Res, Chip	4.7kΩ	J 1/20W	RD611	24011101	Res, Chip	100Ω	J 1/20W
RD301	24011470	Res, Chip	47Ω	J 1/20W	RD612	24011101	Res, Chip	100Ω	J 1/20W
RD302	24019346	Res, Block	100Ωx4	J 1/16W	RD613	24011242	Res, Chip	2.4kΩ	J 1/20W
RD303	24019346	Res, Block	100Ωx4	J 1/16W	RD614	24011242	Res, Chip	2.4kΩ	J 1/20W
RD304	24011750	Res, Chip	75Ω	J 1/20W	RD615	24000572	Res, Chip	3.3Ω	F 1/16W
RD305	24011750	Res, Chip	75Ω	J 1/20W	RD616	24000422	Res, Chip	2.2kΩ	F 1/16W

(Note)

\*a: TLP450, TLP451

\*b: TLP650, TLP651

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RF001	24872335	Res, Chip	3. 3M $\Omega$	J 1/16W	RL047	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RF002	24000597	Res, Chip	20k $\Omega$	F 1/16W	RL048	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RF003	24000597	Res, Chip	20k $\Omega$	F 1/16W	RL049	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RF004	24000594	Res, Chip	12k $\Omega$	F 1/16W	RL050	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RF005	24000605	Res, Chip	6. 8k $\Omega$	F 1/16W	RL051	24011302	Res, Chip	3k $\Omega$	J 1/20W
RF006	24019427	Thermister	NTH4G42B104E01		RL052	24011201	Res, Chip	200 $\Omega$	J 1/20W
RF007	24000488	Res, Chip	3. 9 $\Omega$	J 1/2W	RL053	24011201	Res, Chip	200 $\Omega$	J 1/20W
RF008	24011152	Res, Chip	1. 5k $\Omega$	J 1/20W	RL054	24011123	Res, Chip	12k $\Omega$	J 1/20W
RF009	24872335	Res, Chip	3. 3M $\Omega$	J 1/16W	RL055	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF010	24000595	Res, Chip	15k $\Omega$	F 1/16W	RL056	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF011	24000596	Res, Chip	18k $\Omega$	F 1/16W	RL057	24011473	Res, Chip	47k $\Omega$	J 1/20W
RF012	24000593	Res, Chip	10k $\Omega$	F 1/16W	RL058	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF013	24872101	Res, Chip	100 $\Omega$	J 1/16W	RL059	24011101	Res, Chip	100 $\Omega$	J 1/20W
RF014	24019427	Thermister	NTH4G42B104E01		RL060	24011681	Res, Chip	680 $\Omega$	J 1/20W
RF016	24000488	Res, Chip	3. 9 $\Omega$	J 1/2W	RL061	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF017	24011152	Res, Chip	1. 5k $\Omega$	J 1/20W	RL062	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF021	24019007	Res, Chip	100 $\Omega$	J 1W	RL063	24011123	Res, Chip	12k $\Omega$	J 1/20W
RF022	24019007	Res, Chip	100 $\Omega$	J 1W	RL064	24011123	Res, Chip	12k $\Omega$	J 1/20W
RF023	24000570	Res, Chip	470 $\Omega$	F 1/16W	RL065	24011123	Res, Chip	12k $\Omega$	J 1/20W
RF024	24000573	Res, Chip	1k $\Omega$	F 1/16W	RL066	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W
RF025	24872472	Res, Chip	4. 7k $\Omega$	J 1/16W	RL067	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF050	24000445	Res, Chip Jumper	0 $\Omega$		RL070	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF052	24000445	Res, Chip Jumper	0 $\Omega$		RL073	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF201	24000590	Res, Chip	3k $\Omega$	F 1/16W	RL076	24011101	Res, Chip	100 $\Omega$	J 1/20W
RF202	24000573	Res, Chip	1k $\Omega$	F 1/16W	RL077	24011473	Res, Chip	47k $\Omega$	J 1/20W
RF203	24000606	Res, Chip	8. 2k $\Omega$	F 1/16W	RL078	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF204	24000571	Res, Chip	1. 5k $\Omega$	F 1/16W	RL080	24011103	Res, Chip	10k $\Omega$	J 1/20W
RF205	24000573	Res, Chip	1k $\Omega$	F 1/16W	RL084	24011104	Res, Chip	100k $\Omega$	J 1/20W
RF206	24000605	Res, Chip	6. 8k $\Omega$	F 1/16W	RL085	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W
RF207	24000573	Res, Chip	1k $\Omega$	F 1/16W	RL086	24000564	Res, Block	10k $\Omega$ x4	J 1/16W
RF208	24000573	Res, Chip	1k $\Omega$	F 1/16W	RL087	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL001	24000564	Res, Block	10k $\Omega$ x4	J 1/16W	RL088	24000564	Res, Block	10k $\Omega$ x4	J 1/16W
RL002	24011103	Res, Chip	10k $\Omega$	J 1/20W	RL090	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL003	24011103	Res, Chip	10k $\Omega$	J 1/20W	RL091	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL004	24000564	Res, Block	10k $\Omega$ x4	J 1/16W	RL092	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL005	24011103	Res, Chip	10k $\Omega$	J 1/20W	RL093	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL006	24011101	Res, Chip	100 $\Omega$	J 1/20W	RL094	24011473	Res, Chip	47k $\Omega$	J 1/20W
RL007	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W	RL095	24011473	Res, Chip	47k $\Omega$	J 1/20W
RL008	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W	RL096	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RL009	24011103	Res, Chip	10k $\Omega$	J 1/20W	RL097	24011104	Res, Chip	100k $\Omega$	J 1/20W
RL010	24011102	Res, Chip	1k $\Omega$	J 1/20W	RL098	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W
RL011	24000564	Res, Block	10k $\Omega$ x4	J 1/16W	RL099	24011101	Res, Chip	100 $\Omega$	J 1/20W
RL012	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL100	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL013	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL101	24011104	Res, Chip	100k $\Omega$	J 1/20W
RL014	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL102	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL015	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL103	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL016	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL105	24019346	Res, Block	100 $\Omega$ x4	J 1/16W
RL017	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL106	24011473	Res, Chip	47k $\Omega$	J 1/20W
RL018	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL107	24011473	Res, Chip	47k $\Omega$	J 1/20W
RL019	24011471	Res, Chip	470 $\Omega$	J 1/20W	RL108	24011101	Res, Chip	100 $\Omega$	J 1/20W
RL020	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL109	24011681	Res, Chip	680 $\Omega$	J 1/20W
RL021	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL110	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W
RL022	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL111	24011472	Res, Chip	4. 7k $\Omega$	J 1/20W
RL023	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL112	24000564	Res, Block	10k $\Omega$ x4	J 1/16W
RL024	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL113	24872103	Res, Chip	10k $\Omega$	J 1/16W
RL025	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL114	24011102	Res, Chip	1k $\Omega$	J 1/20W
RL026	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL115	24011102	Res, Chip	1k $\Omega$	J 1/20W
RL027	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL117	24011102	Res, Chip	1k $\Omega$	J 1/20W
RL029	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	RL118	24011473	Res, Chip	47k $\Omega$	J 1/20W
RL030	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*b RL119	24011103	Res, Chip	10k $\Omega$	J 1/20W
RL031	24019346	Res, Block	100 $\Omega$ x4	J 1/16W			- MISCELLANEOUS -		
RL032	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*b P401	23903049	Socket	FPC/FFC	
RL033	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*a P402	23903049	Socket	FPC/FFC	
RL034	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*b P501	23903049	Socket	FPC/FFC	
RL035	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*a P502	23903049	Socket	FPC/FFC	
RL036	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*b P601	23903049	Socket	FPC/FFC	
RL037	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	*a P602	23903049	Socket	FPC/FFC	
RL038	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	P901	70164729	Plug	3P, 1. 25mm	
RL040	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PD001	23713065	Connector	26P	
RL041	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PD002	23903049	Socket	FPC/FFC	
RL042	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PD003	23713068	Connector	50P	
RL043	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PD004	23713066	Connector	2P	
RL044	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PF001	70164729	Plug	3P, 1. 25mm	
RL045	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PF003	23713067	Connector	3P	
RL046	24019346	Res, Block	100 $\Omega$ x4	J 1/16W	PL001	23368303	Plug	9P	

(Note)

\*a: TLP450, TLP451

\*b: TLP650, TLP651

LOCATION NUMBER	PART NUMBER	DESCRIPTION		LOCATION NUMBER	PART NUMBER	DESCRIPTION	
RF06B	23960136	Bond		DB004	A7152750	Diode, Chip	1SS226
SL001	70145452	Switch	Tact	DB005	A7152750	Diode, Chip	1SS226
SL002	70145452	Switch	Tact	DB006	A7152750	Diode, Chip	1SS226
SL003	70145452	Switch	Tact	DB007	A7152750	Diode, Chip	1SS226
SL004	70145452	Switch	Tact	DB008	A7152750	Diode, Chip	1SS226
SL005	70145452	Switch	Tact	DB009	23357168	Diode, Zener	UDZSTE176. 2B
SL006	70145452	Switch	Tact	DB010	23357168	Diode, Zener	UDZSTE176. 2B
SL007	70145452	Switch	Tact	DB011	23357172	Diode, Zener	UDZSTE1710B
SL008	70145452	Switch	Tact	DB012	23357172	Diode, Zener	UDZSTE1710B
SL009	70145452	Switch	Tact	DB013	23357168	Diode, Zener	UDZSTE176. 2B
XL001	23153776	Crystal		DB014	23357168	Diode, Zener	UDZSTE176. 2B
Z704	23103823	Filter	TEM2027D	DB021	23357172	Diode, Zener	UDZSTE1710B
ZD001	23103823	Filter	TEM2027D	DB022	23357172	Diode, Zener	UDZSTE1710B
ZD002	23103823	Filter	TEM2027D	DB023	23357172	Diode, Zener	UDZSTE1710B
ZD003	23103823	Filter	TEM2027D	DB024	23357172	Diode, Zener	UDZSTE1710B
ZD004	23355936	Oscillator	SG82C80M	DB025	23357172	Diode, Zener	UDZSTE1710B
ZD005	23103013	Filter	TEM2020T	DB026	23357172	Diode, Zener	UDZSTE1710B
ZD006	23103013	Filter	TEM2020T	DB027	23357172	Diode, Zener	UDZSTE1710B
ZD100	23103013	Filter	TEM2020T	DB028	23357172	Diode, Zener	UDZSTE1710B
ZD101	23103013	Filter	TEM2020T	DB029	23357172	Diode, Zener	UDZSTE1710B
ZD103	23103013	Filter	TEM2020T			- COILS -	
ZD104	23103823	Filter	TEM2027D	LB001	70132467	Filter	SC200KT
ZD200	23103013	Filter	TEM2020T	LB002	70132467	Filter	SC200KT
ZD201	23103013	Filter	TEM2020T	LB003	70132467	Filter	SC200KT
ZD202	23103013	Filter	TEM2020T	LB004	70132468	Filter	SC800KT
ZD203	23103823	Filter	TEM2027D	LB005	70132468	Filter	SC800KT
ZD204	23153517	Crystal	CX-51F	LB006	70132467	Filter	SC200KT
ZD205	23103823	Filter	TEM2027D	LB007	70132467	Filter	SC200KT
ZD300	23103013	Filter	TEM2020T	LB008	70132467	Filter	SC200KT
ZD301	23103013	Filter	TEM2020T	LB009	70132468	Filter	SC800KT
ZD302	23103013	Filter	TEM2020T	LB010	70132468	Filter	SC800KT
ZD303	23103823	Filter	TEM2027D	LB011	70132468	Filter	SC800KT
ZD400	23103823	Filter	TEM2027D	LB012	70132468	Filter	SC800KT
ZD401	23103823	Filter	TEM2027D	LB013	70132468	Filter	SC800KT
ZD402	23103823	Filter	TEM2027D	LB014	23303119	Filter	TEM1043
ZD403	23103823	Filter	TEM2027D	LB015	23303119	Filter	TEM1043
ZD404	23103823	Filter	TEM2027D	LB016	23303119	Filter	TEM1043
ZD600	23103823	Filter	TEM2027D	LB017	23303119	Filter	TEM1043
ZD601	23103013	Filter	TEM2020T	LB018	23103795	Coil, Chip	MMZ2012S301A
ZD602	23103013	Filter	TEM2020T	LB019	23103795	Coil, Chip	MMZ2012S301A
ZD603	23103013	Filter	TEM2020T	LB020	23103795	Coil, Chip	MMZ2012S301A
				LB021	23103795	Coil, Chip	MMZ2012S301A
				LB022	23103795	Coil, Chip	MMZ2012S301A
■U0021	23783704	P C Board Assy	RGB			- CAPACITORS -	
		- INTEGRATED CIRCUITS -		CB001	24109102	Cap, Chip	1000pF K 50V
QB001	23906662	IC	MAX4158ESA	CB002	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB002	23906662	IC	MAX4158ESA	CB003	24109102	Cap, Chip	1000pF K 50V
QB003	23906662	IC	MAX4158ESA	CB004	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB004	23906663	IC	LT1260CS	CB005	24109102	Cap, Chip	1000pF K 50V
QB005	23906216	IC	MAX497CSE	CB006	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB006	B0489227	IC	TC74ACT244F	CB010	24109102	Cap, Chip	1000pF K 50V
QB007	23000957	IC	EL4332CS-ET	CB011	24109102	Cap, Chip	1000pF K 50V
QB008	23906665	IC	MAX499CWG	CB012	24109102	Cap, Chip	1000pF K 50V
QB016	23906214	IC	M52347FP	CB013	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB017	23906234	IC	M62320FP	CB014	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB022	70129738	IC	PQ20VZ1U	CB015	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB023	23906212	IC	LM2991SX	CB016	24088951	Cap, Chip	6.8 $\mu$ F M 16V
QB026	B0488995	IC	TC74AC157F	CB017	24088951	Cap, Chip	6.8 $\mu$ F M 16V
QB027	A6030630	IC	TC7S08F	CB018	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB028	A6030630	IC	TC7S08F	CB019	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
		- TRANSISTORS -		CB020	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB009	23314202	Transistor, Chip	2SA1037K	CB021	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB010	23314204	Transistor, Chip	2SC2412K	CB022	24088951	Cap, Chip	6.8 $\mu$ F M 16V
QB011	23314202	Transistor, Chip	2SA1037K	CB023	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB012	23314204	Transistor, Chip	2SC2412K	CB024	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
QB013	23314202	Transistor, Chip	2SA1037K	CB025	24088951	Cap, Chip	6.8 $\mu$ F M 16V
QB014	23314204	Transistor, Chip	2SC2412K	CB026	24088951	Cap, Chip	6.8 $\mu$ F M 16V
QB015	23314204	Transistor, Chip	2SC2412K	CB027	24105220	Cap, Chip	22 $\mu$ F J 50V
QB018	A6549570	Transistor, Chip	2SA1586-Y	CB028	24105220	Cap, Chip	22 $\mu$ F J 50V
QB019	A6549570	Transistor, Chip	2SA1586-Y	CB029	24105220	Cap, Chip	22 $\mu$ F J 50V
QB020	A6335470	Transistor, Chip	2SC2712-Y	CB030	24109102	Cap, Chip	1000pF K 50V
QB021	A6335470	Transistor, Chip	2SC2712-Y	CB031	24109102	Cap, Chip	1000pF K 50V
		- DIODES -		CB032	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
DB001	23357168	Diode, Zener	UDZSTE176. 2B	CB033	24100104	Cap, Chip	0.1 $\mu$ F Z 25V
DB002	23357168	Diode, Zener	UDZSTE176. 2B	CB034	24109102	Cap, Chip	1000pF K 50V
DB003	A7152750	Diode, Chip	1SS226				

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CB035	24109102	Cap, Chip	1000pF	K 50V	RB037	24872103	Res, Chip	10kΩ	J 1/16W
CB036	24100104	Cap, Chip	0.1μF	Z 25V	RB038	24872103	Res, Chip	10kΩ	J 1/16W
CB037	24100104	Cap, Chip	0.1μF	Z 25V	RB039	24872104	Res, Chip	100kΩ	J 1/16W
CB038	24619103	Cap, Chip	4.7μF	M 25V	RB040	24872104	Res, Chip	100kΩ	J 1/16W
CB039	24619103	Cap, Chip	4.7μF	M 25V	RB041	24872101	Res, Chip	100Ω	J 1/16W
CB040	24619103	Cap, Chip	4.7μF	M 25V	RB042	24872101	Res, Chip	100Ω	J 1/16W
CB041	24619113	Cap, Chip	1μF	M 50V	RB043	24872221	Res, Chip	220Ω	J 1/16W
CB042	24619100	Cap, Chip	10μF	M 16V	RB044	24872221	Res, Chip	220Ω	J 1/16W
CB043	24105221	Cap, Chip	220pF	J 50V	RB045	24011390	Res, Chip	39Ω	J 1/20W
CB044	24109103	Cap, Chip	0.01μF	K 25V	RB046	24011390	Res, Chip	39Ω	J 1/20W
CB045	24088951	Cap, Chip	6.8μF	M 16V	RB047	24011390	Res, Chip	39Ω	J 1/20W
CB046	24105101	Cap, Chip	100pF	J 50V	RB048	24000426	Res, Chip	1.1Ω	F 1/16W
CB047	24092441	Cap, Chip	1μF	Z 16V	RB049	24000426	Res, Chip	1.1Ω	F 1/16W
CB048	24092441	Cap, Chip	1μF	Z 16V	RB050	24000426	Res, Chip	1.1Ω	F 1/16W
CB049	24088951	Cap, Chip	6.8μF	M 16V	RB051	24000426	Res, Chip	1.1Ω	F 1/16W
CB050	24088951	Cap, Chip	6.8μF	M 16V	RB052	24000426	Res, Chip	1.1Ω	F 1/16W
CB051	24092441	Cap, Chip	1μF	Z 16V	RB053	24000426	Res, Chip	1.1Ω	F 1/16W
CB052	24092441	Cap, Chip	1μF	Z 16V	RB054	24011220	Res, Chip	22Ω	J 1/20W
CB053	24100104	Cap, Chip	0.1μF	Z 25V	RB055	24011220	Res, Chip	22Ω	J 1/20W
CB054	24100104	Cap, Chip	0.1μF	Z 25V	RB056	24011220	Res, Chip	22Ω	J 1/20W
CB055	24619100	Cap, Chip	10μF	M 16V	RB057	24011750	Res, Chip	75Ω	J 1/20W
CB056	24100104	Cap, Chip	0.1μF	Z 25V	RB058	24011750	Res, Chip	75Ω	J 1/20W
CB057	24619100	Cap, Chip	10μF	M 16V	RB059	24011750	Res, Chip	75Ω	J 1/20W
CB058	24100104	Cap, Chip	0.1μF	Z 25V	RB063	24011101	Res, Chip	100Ω	J 1/20W
CB059	24619102	Cap, Chip	47μF	M 16V	RB064	24872820	Res, Chip	82Ω	J 1/16W
CB060	24088953	Cap, Chip	33μF	M 16V	RB065	24011103	Res, Chip	10kΩ	J 1/20W
CB061	24619102	Cap, Chip	47μF	M 16V	RB066	24011220	Res, Chip	22Ω	J 1/20W
CB062	24088953	Cap, Chip	33μF	M 16V	RB067	24011103	Res, Chip	10kΩ	J 1/20W
CB066	24092441	Cap, Chip	1μF	Z 16V	RB068	24011220	Res, Chip	22Ω	J 1/20W
CB067	24092441	Cap, Chip	1μF	Z 16V	RB069	24011103	Res, Chip	10kΩ	J 1/20W
CB068	24092441	Cap, Chip	1μF	Z 16V	RB070	24011220	Res, Chip	22Ω	J 1/20W
CB069	24092441	Cap, Chip	1μF	Z 16V	RB071	24011103	Res, Chip	10kΩ	J 1/20W
CB070	24092441	Cap, Chip	1μF	Z 16V	RB072	24011220	Res, Chip	22Ω	J 1/20W
CB071	24092441	Cap, Chip	1μF	Z 16V	RB073	24872820	Res, Chip	82Ω	J 1/16W
CB072	24088978	Cap, Chip	22μF	M 20V	RB074	24872820	Res, Chip	82Ω	J 1/16W
CB073	24088978	Cap, Chip	22μF	M 20V	RB075	24011220	Res, Chip	22Ω	J 1/20W
CB074	24092441	Cap, Chip	1μF	Z 16V	RB076	24011220	Res, Chip	22Ω	J 1/20W
CB075	24092441	Cap, Chip	1μF	Z 16V	RB077	24011103	Res, Chip	10kΩ	J 1/20W
- RESISTORS -					RB078	24011103	Res, Chip	10kΩ	J 1/20W
RB001	24871750	Res, Chip	75Ω	J 1/8W	RB079	24011220	Res, Chip	22Ω	J 1/20W
RB002	24871750	Res, Chip	75Ω	J 1/8W	RB080	24011222	Res, Chip	2.2kΩ	J 1/20W
RB003	24871750	Res, Chip	75Ω	J 1/8W	RB081	24011220	Res, Chip	22Ω	J 1/20W
RB004	24872103	Res, Chip	10kΩ	J 1/16W	RB082	24011222	Res, Chip	2.2kΩ	J 1/20W
RB005	24872103	Res, Chip	10kΩ	J 1/16W	RB083	24011820	Res, Chip	82Ω	J 1/20W
RB006	24011680	Res, Chip	68Ω	J 1/20W	RB084	24011222	Res, Chip	2.2kΩ	J 1/20W
RB007	24011750	Res, Chip	75Ω	J 1/20W	RB085	24011220	Res, Chip	22Ω	J 1/20W
RB008	24011103	Res, Chip	10kΩ	J 1/20W	RB086	24872750	Res, Chip	75Ω	J 1/16W
RB009	24011680	Res, Chip	68Ω	J 1/20W	RB087	24011220	Res, Chip	22Ω	J 1/20W
RB010	24011750	Res, Chip	75Ω	J 1/20W	RB088	24872750	Res, Chip	75Ω	J 1/16W
RB011	24011103	Res, Chip	10kΩ	J 1/20W	RB089	24011220	Res, Chip	22Ω	J 1/20W
RB012	24011680	Res, Chip	68Ω	J 1/20W	RB090	24872750	Res, Chip	75Ω	J 1/16W
RB013	24011750	Res, Chip	75Ω	J 1/20W	RB091	24011101	Res, Chip	100Ω	J 1/20W
RB014	24011103	Res, Chip	10kΩ	J 1/20W	RB092	24872750	Res, Chip	75Ω	J 1/16W
RB015	24011560	Res, Chip	56Ω	J 1/20W	RB093	24872750	Res, Chip	75Ω	J 1/16W
RB016	24000450	Res, Chip	100Ω	F 1/16W	RB094	24872750	Res, Chip	75Ω	J 1/16W
RB017	24000461	Res, Chip	330Ω	F 1/16W	RB095	24872821	Res, Chip	820Ω	J 1/16W
RB018	24011560	Res, Chip	56Ω	J 1/20W	RB096	24011220	Res, Chip	22Ω	J 1/20W
RB019	24000450	Res, Chip	100Ω	F 1/16W	RB097	24872681	Res, Chip	680Ω	J 1/16W
RB020	24000461	Res, Chip	330Ω	F 1/16W	RB098	24011470	Res, Chip	47Ω	J 1/20W
RB021	24011560	Res, Chip	56Ω	J 1/20W	RB099	24011103	Res, Chip	10kΩ	J 1/20W
RB022	24000450	Res, Chip	100Ω	F 1/16W	RB100	24872821	Res, Chip	820Ω	J 1/16W
RB023	24000461	Res, Chip	330Ω	F 1/16W	RB101	24011220	Res, Chip	22Ω	J 1/20W
RB024	24011220	Res, Chip	22Ω	J 1/20W	RB102	24872681	Res, Chip	680Ω	J 1/16W
RB025	24011222	Res, Chip	2.2kΩ	J 1/20W	RB103	24011470	Res, Chip	47Ω	J 1/20W
RB026	24011220	Res, Chip	22Ω	J 1/20W	RB104	24011103	Res, Chip	10kΩ	J 1/20W
RB027	24011222	Res, Chip	2.2kΩ	J 1/20W	RB105	24872821	Res, Chip	820Ω	J 1/16W
RB028	24011220	Res, Chip	22Ω	J 1/20W	RB106	24011220	Res, Chip	22Ω	J 1/20W
RB029	24011222	Res, Chip	2.2kΩ	J 1/20W	RB107	24872681	Res, Chip	680Ω	J 1/16W
RB030	24011220	Res, Chip	22Ω	J 1/20W	RB108	24011470	Res, Chip	47Ω	J 1/20W
RB031	24011222	Res, Chip	2.2kΩ	J 1/20W	RB109	24011103	Res, Chip	10kΩ	J 1/20W
RB032	24872750	Res, Chip	75Ω	J 1/16W	RB110	24011100	Res, Chip	10Ω	J 1/20W
RB033	24872750	Res, Chip	75Ω	J 1/16W	RB111	24011100	Res, Chip	10Ω	J 1/20W
RB034	24872750	Res, Chip	75Ω	J 1/16W	RB112	24011100	Res, Chip	10Ω	J 1/20W
RB035	24872750	Res, Chip	75Ω	J 1/16W	RB113	24872750	Res, Chip	75Ω	J 1/16W
RB036	24872103	Res, Chip	10kΩ	J 1/16W	RB114	24011331	Res, Chip	330Ω	J 1/20W

LOCATION NUMBER	PART NUMBER	DESCRIPTION			LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RB115	24872560	Res, Chip	56Ω	J 1/16W	PB006	23903049	Socket	FPC/FFC	
RB116	24872331	Res, Chip	330Ω	J 1/16W	■U0022	23783705	P C Board Assy	Input	
RB117	24872560	Res, Chip	56Ω	J 1/16W			- INTEGRATED CIRCUITS -		
RB118	24011104	Res, Chip	100kΩ	J 1/20W	QA01	70128490	IC	MM1031M	
RB119	24011101	Res, Chip	100Ω	J 1/20W	QA02	70128503	IC	MM1041XMR	
RB120	24872821	Res, Chip	820Ω	J 1/16W	QA03	70128490	IC	MM1031M	
RB121	24011220	Res, Chip	22Ω	J 1/20W	QA06	23905590	IC	M52055FP	
RB122	24000419	Res, Chip	4.3kΩ	F 1/16W	QA09	23000958	IC	M62420FP-T	
RB123	24011101	Res, Chip	100Ω	J 1/20W	QA10	23906399	IC	LA4425A	
RB124	24011101	Res, Chip	100Ω	J 1/20W	QA11	A6030630	IC	TC7S08F	
RB125	24000405	Res, Chip	62kΩ	F 1/16W	QA12	A6030630	IC	TC7S08F	
RB126	24011472	Res, Chip	4.7kΩ	J 1/20W	QA13	23906234	IC	M62320FP	
RB127	24011472	Res, Chip	4.7kΩ	J 1/20W	QA20	70129738	IC	PQ20VZ1U	
RB128	24011472	Res, Chip	4.7kΩ	J 1/20W	QA21	70129738	IC	PQ20VZ1U	
RB129	24011472	Res, Chip	4.7kΩ	J 1/20W	QA22	70129738	IC	PQ20VZ1U	
RB130	24011101	Res, Chip	100Ω	J 1/20W	QA23	A6030630	IC	TC7S08F	
RB131	24011101	Res, Chip	100Ω	J 1/20W			- TRANSISTORS -		
RB132	24011101	Res, Chip	100Ω	J 1/20W	QA04	A6365620	Transistor, Chip	2SC4116-Y	
RB133	24011101	Res, Chip	100Ω	J 1/20W	QA05	A6365620	Transistor, Chip	2SC4116-Y	
RB134	24011101	Res, Chip	100Ω	J 1/20W	QA07	A6549570	Transistor, Chip	2SA1586-Y	
RB135	24011101	Res, Chip	100Ω	J 1/20W	QA08	A6549570	Transistor, Chip	2SA1586-Y	
RB136	24011101	Res, Chip	100Ω	J 1/20W	QA14	23314202	Transistor, Chip	2SA1037K	
RB137	24011101	Res, Chip	100Ω	J 1/20W	QA15	23314202	Transistor, Chip	2SA1037K	
RB138	24011101	Res, Chip	100Ω	J 1/20W	QA16	23314202	Transistor, Chip	2SA1037K	
RB139	24011101	Res, Chip	100Ω	J 1/20W			- DIODES -		
RB140	24011101	Res, Chip	100Ω	J 1/20W	DA01	23357172	Diode, Zener	UDZSTE1710B	
RB141	24011101	Res, Chip	100Ω	J 1/20W	DA02	23357172	Diode, Zener	UDZSTE1710B	
RB142	24011101	Res, Chip	100Ω	J 1/20W	DA03	23357172	Diode, Zener	UDZSTE1710B	
RB143	24011101	Res, Chip	100Ω	J 1/20W	DA04	23357172	Diode, Zener	UDZSTE1710B	
RB144	24011101	Res, Chip	100Ω	J 1/20W	DA05	23357172	Diode, Zener	UDZSTE1710B	
RB146	24011101	Res, Chip	100Ω	J 1/20W	DA06	23357168	Diode, Zener	UDZSTE176. 2B	
RB147	24011101	Res, Chip	100Ω	J 1/20W	DA08	23357168	Diode, Zener	UDZSTE176. 2B	
RB149	24011101	Res, Chip	100Ω	J 1/20W	DA09	23357168	Diode, Zener	UDZSTE176. 2B	
RB150	24011103	Res, Chip	10kΩ	J 1/20W			- COILS -		
RB151	24872473	Res, Chip	47kΩ	J 1/16W	LA01	23245839	Coil, Chip	TRF4560CB	
RB152	24872223	Res, Chip	22kΩ	J 1/16W	LA02	23245847	Coil, Chip	TRF4330CC	
RB153	24872223	Res, Chip	22kΩ	J 1/16W	LA03	23245847	Coil, Chip	TRF4330CC	
RB154	24872101	Res, Chip	100Ω	J 1/16W	LA04	23245847	Coil, Chip	TRF4330CC	
RB155	24872182	Res, Chip	1.8kΩ	J 1/16W	LA05	70132468	Filter	SC800KT	
RB156	24872101	Res, Chip	100Ω	J 1/16W	LA06	70132468	Filter	SC800KT	
RB157	24872473	Res, Chip	47kΩ	J 1/16W	LA07	70132468	Filter	SC800KT	
RB158	24872223	Res, Chip	22kΩ	J 1/16W	LA08	70132468	Filter	SC800KT	
RB159	24872101	Res, Chip	100Ω	J 1/16W	LA09	70132468	Filter	SC800KT	
RB160	24872223	Res, Chip	22kΩ	J 1/16W	LA10	23245847	Coil, Chip	TRF4330CC	
RB161	24872182	Res, Chip	1.8kΩ	J 1/16W	LA11	23303119	Filter	TEM1043	
RB162	24872101	Res, Chip	100Ω	J 1/16W	LA12	23303119	Filter	TEM1043	
RB163	24872102	Res, Chip	1kΩ	J 1/16W			- CAPACITORS -		
RB164	24872104	Res, Chip	100kΩ	J 1/16W	CA01	24619102	Cap, Chip	47μF	M 16V
RB165	24872182	Res, Chip	1.8kΩ	J 1/16W	CA02	24100104	Cap, Chip	0.1μF	Z 25V
RB166	24872101	Res, Chip	100Ω	J 1/16W	CA03	24619113	Cap, Chip	1μF	M 50V
RB167	24872102	Res, Chip	1kΩ	J 1/16W	CA04	24619102	Cap, Chip	47μF	M 16V
RB168	24872104	Res, Chip	100kΩ	J 1/16W	CA05	24092441	Cap, Chip	1μF	Z 16V
RB169	24872182	Res, Chip	1.8kΩ	J 1/16W	CA06	24092441	Cap, Chip	1μF	Z 16V
RB170	24872101	Res, Chip	100Ω	J 1/16W	CA07	24619102	Cap, Chip	47μF	M 16V
RB171	24000590	Res, Chip	3kΩ	F 1/16W	CA08	24088079	Cap, Chip	10μF	M 10V
RB172	24000573	Res, Chip	1kΩ	F 1/16W	CA09	24088079	Cap, Chip	10μF	M 10V
RB173	24000558	Res, Chip	750Ω	F 1/16W	CA10	24088079	Cap, Chip	10μF	M 10V
RB174	24000458	Res, Chip	240Ω	F 1/16W	CA11	24100104	Cap, Chip	0.1μF	Z 25V
RB175	24011101	Res, Chip	100Ω	J 1/20W	CA12	24619100	Cap, Chip	10μF	M 16V
RB201	24011104	Res, Chip	100kΩ	J 1/20W	CA13	24100104	Cap, Chip	0.1μF	Z 25V
RB202	24011470	Res, Chip	47Ω	J 1/20W	CA14	24619100	Cap, Chip	10μF	M 16V
RB203	24011104	Res, Chip	100kΩ	J 1/20W	CA15	24619100	Cap, Chip	10μF	M 16V
RB204	24011470	Res, Chip	47Ω	J 1/20W	CA16	24619100	Cap, Chip	10μF	M 16V
RB205	24011104	Res, Chip	100kΩ	J 1/20W	CA17	24619100	Cap, Chip	10μF	M 16V
RB206	24011470	Res, Chip	47Ω	J 1/20W	CA18	24100104	Cap, Chip	0.1μF	Z 25V
RB207	24011104	Res, Chip	100kΩ	J 1/20W	CA19	24619102	Cap, Chip	47μF	M 16V
RB208	24011470	Res, Chip	47Ω	J 1/20W	CA20	24100104	Cap, Chip	0.1μF	Z 25V
RB209	24011104	Res, Chip	100kΩ	J 1/20W	CA21	24619102	Cap, Chip	47μF	M 16V
RB210	24011470	Res, Chip	47Ω	J 1/20W	CA22	24092538	Cap, Chip	1μF	Z 10V
		- MISCELLANEOUS -			CA23	24815223	Cap, Chip	0.022μF	K 50V
PB001	23903047	Socket	DSUB		CA24	24815473	Cap, Chip	0.047μF	K 50V
PB002	23365971	Earphono Jack			CA25	24815333	Cap, Chip	0.033μF	K 50V
PB003	23903047	Socket	DSUB		CA26	24092538	Cap, Chip	1μF	Z 10V
PB004	23365971	Earphono Jack			CA27	24815223	Cap, Chip	0.022μF	K 50V
PB005	23713069	Connector	50P						

LOCATION NUMBER	PART NUMBER	DESCRIPTION							
CA28	24815473	Cap, Chip	0.047 $\mu$ F	K	50V				
CA29	24815333	Cap, Chip	0.033 $\mu$ F	K	50V				
CA30	24619100	Cap, Chip	10 $\mu$ F	M	16V				
CA31	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA32	24815102	Cap, Chip	1000pF	K	50V				
CA33	24619113	Cap, Chip	1 $\mu$ F	M	50V				
CA34	24619113	Cap, Chip	1 $\mu$ F	M	50V				
CA35	24666331	Cap, Electrolytic	330 $\mu$ F	M	16V				
CA36	24666331	Cap, Electrolytic	330 $\mu$ F	M	16V				
CA37	24619102	Cap, Chip	47 $\mu$ F	M	16V				
CA38	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA39	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA40	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA41	24619102	Cap, Chip	47 $\mu$ F	M	16V				
CA42	24619102	Cap, Chip	47 $\mu$ F	M	16V				
CA43	24619102	Cap, Chip	47 $\mu$ F	M	16V				
CA44	24619100	Cap, Chip	10 $\mu$ F	M	16V				
CA45	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA53	24667221	Cap, Electrolytic	220 $\mu$ F	M	25V				
CA54	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA55	24295106	Cap, Chip	10 $\mu$ F	M	25V				
CA56	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA57	24295106	Cap, Chip	10 $\mu$ F	M	25V				
CA58	24088953	Cap, Chip	33 $\mu$ F	M	16V				
CA59	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA60	24088953	Cap, Chip	33 $\mu$ F	M	16V				
CA61	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA62	24088953	Cap, Chip	33 $\mu$ F	M	16V				
CA63	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA64	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA65	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA66	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA67	24667221	Cap, Electrolytic	220 $\mu$ F	M	25V				
CA68	24667221	Cap, Electrolytic	220 $\mu$ F	M	25V				
CA69	24667221	Cap, Electrolytic	220 $\mu$ F	M	25V				
CA70	24667221	Cap, Electrolytic	220 $\mu$ F	M	25V				
CA71	24665471	Cap, Electrolytic	470 $\mu$ F	M	10V				
CA72	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
CA73	24665471	Cap, Electrolytic	470 $\mu$ F	M	10V				
CA74	24100104	Cap, Chip	0.1 $\mu$ F	Z	25V				
- RESISTORS -									
RA01	24871750	Res, Chip	75 $\Omega$	J	1/8W				
RA02	24871750	Res, Chip	75 $\Omega$	J	1/8W				
RA03	24011473	Res, Chip	47k $\Omega$	J	1/20W				
RA04	24011473	Res, Chip	47k $\Omega$	J	1/20W				
RA07	24011470	Res, Chip	47 $\Omega$	J	1/20W				
RA09	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA12	24011470	Res, Chip	47 $\Omega$	J	1/20W				
RA14	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA17	24011470	Res, Chip	47 $\Omega$	J	1/20W				
RA19	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA20	24011333	Res, Chip	33k $\Omega$	J	1/20W				
RA21	24011473	Res, Chip	47k $\Omega$	J	1/20W				
RA22	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA23	24011222	Res, Chip	2.2k $\Omega$	J	1/20W				
RA24	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA25	24011333	Res, Chip	33k $\Omega$	J	1/20W				
RA26	24011473	Res, Chip	47k $\Omega$	J	1/20W				
RA27	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA28	24011222	Res, Chip	2.2k $\Omega$	J	1/20W				
RA29	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA30	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA31	24011332	Res, Chip	3.3k $\Omega$	J	1/20W				
RA32	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA33	24011332	Res, Chip	3.3k $\Omega$	J	1/20W				
RA34	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA35	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA36	24011472	Res, Chip	4.7k $\Omega$	J	1/20W				
RA37	24011472	Res, Chip	4.7k $\Omega$	J	1/20W				
RA38	24011152	Res, Chip	1.5k $\Omega$	J	1/20W				
RA39	24011471	Res, Chip	470 $\Omega$	J	1/20W				
RA40	24011152	Res, Chip	1.5k $\Omega$	J	1/20W				
RA41	24011471	Res, Chip	470 $\Omega$	J	1/20W				
RA42	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA43	24011104	Res, Chip	100k $\Omega$	J	1/20W				
RA44	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA45	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA46	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA47	24011681	Res, Chip	680 $\Omega$	J	1/20W				
RA48	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA49	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA50	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA51	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA52	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA53	24011332	Res, Chip	3.3k $\Omega$	J	1/20W				
RA54	24011332	Res, Chip	3.3k $\Omega$	J	1/20W				
RA55	24011332	Res, Chip	3.3k $\Omega$	J	1/20W				
RA56	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA57	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA58	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA59	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA60	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA61	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA62	24011472	Res, Chip	4.7k $\Omega$	J	1/20W				
RA63	24011472	Res, Chip	4.7k $\Omega$	J	1/20W				
RA64	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA65	24011222	Res, Chip	2.2k $\Omega$	J	1/20W				
RA66	24011222	Res, Chip	2.2k $\Omega$	J	1/20W				
RA67	24011222	Res, Chip	2.2k $\Omega$	J	1/20W				
RA74	24000606	Res, Chip	8.2k $\Omega$	F	1/16W				
RA75	24000573	Res, Chip	1k $\Omega$	F	1/16W				
RA76	24019007	Res, Chip	100 $\Omega$	J	1W				
RA77	24000449	Res, Chip	6.2k $\Omega$	F	1/16W				
RA78	24000573	Res, Chip	1k $\Omega$	F	1/16W				
RA79	24000590	Res, Chip	3k $\Omega$	F	1/16W				
RA80	24000573	Res, Chip	1k $\Omega$	F	1/16W				
RA81	24871750	Res, Chip	75 $\Omega$	J	1/8W				
RA82	24011101	Res, Chip	100 $\Omega$	J	1/20W				
RA86	24011103	Res, Chip	10k $\Omega$	J	1/20W				
RA87	24000488	Res, Chip	3.9 $\Omega$	J	1/2W				
RA88	24000488	Res, Chip	3.9 $\Omega$	J	1/2W				
RA89	24000488	Res, Chip	3.9 $\Omega$	J	1/2W				
RA90	24000445	Res, Chip Jumper	0 $\Omega$						
- MISCELLANEOUS -									
PA01	23365684	Phono Jack				S-VHS, 4P			
PA02	23365275	Phono Jack							
PA03	23903048	Socket				FPC/FFC			
PA04	23368672	Plug				26P			
PA05	23903048	Socket				FPC/FFC			
■U007	23784175	P C Board Assy				Sub Digital			
- INTEGRATED CIRCUITS -									
QD700	23906863	IC				SN74LVC157AP			
QF503	B0488399	IC				TC74HC123AF			
- TRANSISTORS -									
QF501	A6549570	Transistor, Chip				2SA1586-Y			
QF502	A6549570	Transistor, Chip				2SA1586-Y			
- DIODES -									
DF530	23118041	Diode, Chip				MA111			
DF531	23118041	Diode, Chip				MA111			
- CAPACITORS -									
CD700	24088079	Cap, Chip	10 $\mu$ F		M	10V			
CD701	24100104	Cap, Chip	0.1 $\mu$ F		Z	25V			
CF510	24092441	Cap, Chip	1 $\mu$ F		Z	16V			
CF520	24092441	Cap, Chip	1 $\mu$ F		Z	16V			
CF530	24092178	Cap, Chip	0.1 $\mu$ F		K	25V			
CF531	24092441	Cap, Chip	1 $\mu$ F		Z	16V			
CF532	24092441	Cap, Chip	1 $\mu$ F		Z	16V			
- RESISTORS -									
RD700	24011470	Res, Chip	47 $\Omega$		J	1/20W			
RD701	24011101	Res, Chip	100 $\Omega$		J	1/20W			
RF510	24011103	Res, Chip	10k $\Omega$		J	1/20W			
RF511	24011104	Res, Chip	100k $\Omega$		J	1/20W			
RF513	24011223	Res, Chip	22k $\Omega$		J	1/20W			
RF520	24011103	Res, Chip	10k $\Omega$		J	1/20W			
RF521	24011104	Res, Chip	100k $\Omega$		J	1/20W			
RF523	24011223	Res, Chip	22k $\Omega$		J	1/20W			
RF530	24011823	Res, Chip	82k $\Omega$		J	1/20W			
RF531	24011823	Res, Chip	82k $\Omega$		J	1/20W			
- MISCELLANEOUS -									



LOCATION NUMBER	PART NUMBER	DESCRIPTION		LOCATION NUMBER	PART NUMBER	DESCRIPTION	
ND710	23969797	Tape		FH001	23144614	Fuse	125V, 0.5A
ND711	23969797	Tape		PH002	23368708	Plug	20P, 1mm
ZD700	23103823	Filter	TEM2027D	SH001	23344088	Push Switch	
■U0031	23783706	P C Board Assy	CAMSW (TLP451, TLP651)	SH002	23344088	Push Switch	
		- INTEGRATED CIRCUITS -		SH003	23344088	Push Switch	
QH001	70129738	IC	PQ20VZ1U	SH004	23344088	Push Switch	
QH002	70129738	IC	PQ20VZ1U	SH005	23344088	Push Switch	
QH003	70129738	IC	PQ20VZ1U	■U0032	23783707	P C Board Assy	LED (TLP451, TLP651)
QH004	A6030630	IC	TC7S08F			- TRANSISTORS -	
QH005	23906234	IC	M62320FP	QH701	23314344	Transistor, Chip	IMX1
QH006	23906782	IC	TSOP1838	QH702	23314344	Transistor, Chip	IMX1
QH041	A6030630	IC	TC7S08F	QH703	23314344	Transistor, Chip	IMX1
		- DIODES -		QH704	23314344	Transistor, Chip	IMX1
DH001	23358539	Diode, LED	SML-020MLTT6			- DIODES -	
DH401	23357168	Diode, Zener	UDZSTE176. 2B	DH700	23118275	Diode, Zener	RD18M-T1BB2
DH501	23357168	Diode, Zener	UDZSTE176. 2B	DH701	23358546	Diode, LED	NSPW310BS
DH502	23357168	Diode, Zener	UDZSTE176. 2B	DH702	23358546	Diode, LED	NSPW310BS
DH503	23357168	Diode, Zener	UDZSTE176. 2B	DH703	23358546	Diode, LED	NSPW310BS
DH504	23357168	Diode, Zener	UDZSTE176. 2B	DH704	23358546	Diode, LED	NSPW310BS
DH505	23357168	Diode, Zener	UDZSTE176. 2B	DH705	23358546	Diode, LED	NSPW310BS
DH506	23357168	Diode, Zener	UDZSTE176. 2B	DH706	23358546	Diode, LED	NSPW310BS
DH507	23357168	Diode, Zener	UDZSTE176. 2B	DH707	23358546	Diode, LED	NSPW310BS
DH508	23357168	Diode, Zener	UDZSTE176. 2B	DH708	23358546	Diode, LED	NSPW310BS
DH509	A7150800	Diode, Chip	1SS187	DH709	23358546	Diode, LED	NSPW310BS
DH510	23357168	Diode, Zener	UDZSTE176. 2B	DH710	23358546	Diode, LED	NSPW310BS
DH511	23357168	Diode, Zener	UDZSTE176. 2B	DH711	23358546	Diode, LED	NSPW310BS
DH601	A7150800	Diode, Chip	1SS187	DH712	23358546	Diode, LED	NSPW310BS
DH602	23357168	Diode, Zener	UDZSTE176. 2B	DH720	23118275	Diode, Zener	RD18M-T1BB2
		- CAPACITORS -		DH721	23118275	Diode, Zener	RD18M-T1BB2
CH101	24295106	Cap, Chip	10 $\mu$ F M 25V	DH722	23118275	Diode, Zener	RD18M-T1BB2
CH102	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	DH723	23118275	Diode, Zener	RD18M-T1BB2
CH103	24092178	Cap, Chip	0. 1 $\mu$ F K 25V			- RESISTORS -	
CH104	24295106	Cap, Chip	10 $\mu$ F M 25V	RH701	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W
CH201	24295106	Cap, Chip	10 $\mu$ F M 25V	RH702	24872471	Res, Chip	470 $\Omega$ J 1/16W
CH202	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH703	24872470	Res, Chip	47 $\Omega$ J 1/16W
CH203	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH704	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W
CH204	24088951	Cap, Chip	6. 8 $\mu$ F M 16V	RH705	24872471	Res, Chip	470 $\Omega$ J 1/16W
CH301	24088951	Cap, Chip	6. 8 $\mu$ F M 16V	RH706	24872470	Res, Chip	47 $\Omega$ J 1/16W
CH302	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH707	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W
CH303	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH708	24872471	Res, Chip	470 $\Omega$ J 1/16W
CH304	24088951	Cap, Chip	6. 8 $\mu$ F M 16V	RH709	24872470	Res, Chip	47 $\Omega$ J 1/16W
CH401	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH710	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W
CH402	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH711	24872471	Res, Chip	470 $\Omega$ J 1/16W
CH501	24092178	Cap, Chip	0. 1 $\mu$ F K 25V	RH712	24872470	Res, Chip	47 $\Omega$ J 1/16W
CH601	24088948	Cap, Chip, Tantalum	47 $\mu$ F M 10V			- MISCELLANEOUS -	
CH602	24781152	Cap, Chip	1500pF J 50V	PH700	70164729	Plug	3P, 1. 25mm
		- RESISTORS -					
RH101	24000593	Res, Chip	10k $\Omega$ F 1/16W				
RH102	24000573	Res, Chip	1k $\Omega$ F 1/16W				
RH201	24000449	Res, Chip	6. 2k $\Omega$ F 1/16W				
RH202	24000573	Res, Chip	1k $\Omega$ F 1/16W				
RH203	24019007	Res, Chip	100 $\Omega$ J 1W				
RH301	24000422	Res, Chip	2. 2k $\Omega$ F 1/16W				
RH302	24000573	Res, Chip	1k $\Omega$ F 1/16W				
RH501	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH502	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH503	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH504	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH506	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH507	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH508	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
RH509	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH510	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH511	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH512	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH513	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH514	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH515	24872221	Res, Chip	220 $\Omega$ J 1/16W				
RH516	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH517	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH518	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH601	24872101	Res, Chip	100 $\Omega$ J 1/16W				
RH602	24872472	Res, Chip	4. 7k $\Omega$ J 1/16W				
		- MISCELLANEOUS -					

**T O S H I B A   C O R P O R A T I O N**  
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN